

SOUTHWESTERN NATIONAL MONUMENTS

MONTHLY REPORTS

JANUARY-JUNE 1941

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SOUTHWESTERN MONUMENTS

MONTHLY REPORT



JANUARY 1941

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THE SOUTHWESTERN NATIONAL MONUMENTS

JANUARY, 1941

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*****SWM*****

HEADQUARTERS

SOUTHWESTERN NATIONAL MONUMENTS
NATIONAL PARK SERVICE

COOLIDGE, ARIZONA

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HUGH M. MILLER, SUPERINTENDENT

<u>FIELD STATION</u>	<u>POST OFFICE</u>	<u>CUSTODIANS</u>	<u>1940 VISITORS</u>	<u>ACRES IN AREA</u>
1. ARCHES	Moab, Utah	Henry G. Schmidt	2,518	33,680.00
2. AZTEC RUINS	Aztec, New Mex.	Thomas C. Miller	10,550	25.88
3. BANDELIER	Santa Fe, N.M.	Chester A. Thomas	13,689	26,026.20
4. CANYON DE CHELLY	Chin Lee, Ariz	Charles D. Wyatt	2,733	83,840.00
5. CAPULIN MOUNTAIN	Capulin, N.M.	Homer J. Farr	35,100	680.42
6. CASA GRANDE	Coolidge, Ariz.	Albert T. Bicknell	12,877	472.50
7. CHACO CANYON	Chaco Canyon, NM	Lewis T. McKinney	2,245	21,509.40
8. CHIRICAHUA	Dos Cabezas, Ariz	Frank L. Fish	10,120	10,694.80
9. EL MORRO	Ramah, N. Mex.	Robert R. Budlong	1,593	240.00
10. GILA CLIFF DWEL	New Mexico	No Custodian	80	160.00
11. GRAN QUIVIRA	Gran Quivira, NM	Joe H. Toulouse	2,494	610.24
12. HOVENWEEP	Cortez, Colo.	No Custodian	352	285.80
13. MONTEZUMA CASTLE	Camp Verde, Ariz	Earl Jackson	8,078	521.41
14. NATURAL BRIDGES	Blanding, Utah	Zeke Johnson	901	2,740.00
15. NAVAJO	Tonalea, Ariz.	James W. Brewer	513	360.00
16. ORGAN PIPE CAC.	Ajo, Arizona	William Supernaugh	9,775	330,687.00
17. PIPE SPRING	Moccasin, Ariz.	Leonard Heaton, Act.	1,141	40.00
18. RAINBOW BRIDGE	Tonalea, Ariz.	No Custodian	215	160.00
19. SAGUARO	Tucson, Ariz.	Don W. Egermayer	16,892	63,284.00
20. SUNSET CRATER	Flagstaff, Ariz.	D. Jones, in chg.	11,888	3,040.00
21. TONTO	Roosevelt, Ariz	John Peavy	5,240	1,120.00
22. TUMACACORI	Nogales, Ariz.	Louis Caywood	7,287	10.00
23. TUZIGOOT	Clarkdale, Ariz	Jack Cotter	6,125	42.61
24. WALNUT CANYON	Flagstaff, Ariz	Paul Beaubien	12,258	1,873.10
25. WHITE SANDS	Alamogordo, N.M.	Johnwill Faris	54,498	143,227.47
26. WUPATKI	Flagstaff, Ariz	David J. Jones	3,326	35,865.30
27. YUCCA HOUSE	Cortez, Colo.	No Custodian	136	10.00
TOTALS			232,624	761,206.89

AREA, END TRAVEL YEAR 1940: 1,189,395 Sq. Miles

OPENING

By Hugh M. Miller, Superintendent

The Superintendent was absent from Headquarters on January 9 and 10 investigating a proposed national monument area in the Mule Mountains near Bisbee, Arizona. Adverse report was submitted to your office. On January 11 the Superintendent attended a meeting of the Arizona Wildlife Federation in Phoenix, proceeding from Phoenix to Flagstaff for the purpose of interviewing an eligible certified for filling the vacant relief ranger position. Returned to Coolidge January 12. Leaving Coolidge by train January 17, the Superintendent spent the remainder of the month travelling to and in attendance at the National Park Conference in Washington, D. C. Great benefit was derived from the discussions in the Conference and from the opportunity of discussing important problems personally with the Director and branch heads.

Approval of the annual Custodians' Meeting was received during the month. The dates of February 19, 20, and 21 have been fixed, and plans for a successful meeting have been advanced to the final stage. The Headquarters staff looks forward earnestly and with great interest to this meeting at which common problems will be discussed with the field men as a group.

Bills affecting Organ Pipe Cactus and Saguaro National Monuments have been re-introduced in the Congress and were the subject of discussion with members of the Washington staff.

Positions as clerk-typist at Headquarters and relief ranger under the regular appropriation are still vacant, though selection has been made for the relief ranger position and a temporary employee is working in the clerical position. One Headquarters position as Junior Clerk-stenographer under CCC is still vacant. Certificate has been received, however, and this position may be filled in February.

Rights-of-way problems are still holding up construction on the major road project at Organ Pipe Cactus National Monument. As a result of conference in Washington, these problems seem to be on the way to early solution.

Most spectacular piece of news for the month was the fall of Threatening Rock at Chaco Canyon National Monument. Deeply regretted, the fall of the Rock and the damage to Fueblo Bonito represents the operation of natural forces over which, in a broad view, it may not have been the function of this Service to seek to exercise control. It seems likely that the fallen rock, with considerable sections of the prehistoric ruin sharing in evidence, may become one of the most dramatic stories of prehistoric occupation to be told in the Southwest.

Progress on CCC projects has been hampered by weather conditions throughout the month, by replacements of enrolled personnel, and by the condition of equipment. Applications for CCC camps for the seventeenth period were submitted on January 16.

An important conference was held in the Coolidge office on January 6 and 7 in which plans were formulated for getting the soil and

moisture conservation program under way in the Southwestern National Monuments.

The Acting Superintendent conferred with Associate Architects Kuehl and Miller on January 21, 22, and 23 with respect to preparation and revision of Master Plans for the 1941 edition. Under the present policy of staggered revision, 1941 Master Plan editions will be submitted for Bandelier, Casa Grande, El Morro, Organ Pipe Cactus, Walnut Canyon, White Sands, and Wupatki. The field assistance given by the Branch of Plans and Design is deeply appreciated.

Severe rain and snow storms were felt over the entire southwest during January. Many roads have been impassable throughout the month and others have been blocked for periods ranging from several hours to a week. Most roads in the Navajo country are impassable except at night when the ruts have frozen. In spite of these difficulties, travel to the Southwestern Monuments show a gain of nearly a thousand over the figures for January, 1940. The increase in travel to Casa Grande, Tumacacori and White Sands more than compensates for the decreased travel figures at those monuments where adverse weather conditions have caused fewer visitors.

*****SWNM*****

CONDENSED REPORT

IN WHICH HIGHLIGHTS OF THE MONTH ARE GIVEN

Coolidge, Arizona
February 1, 1941

The Director
National Park Service
Washington, D. C.

Dear Mr. Director:

The Condensed Report for the month of January, 1941, follows:

TRAVEL

<u>Station</u>	1941		1940	
	<u>January</u>	<u>Travel Year</u>	<u>January</u>	<u>Travel Year</u>
Archos	49	660	57	650
Capulin	25*	5550*	200*	6400*
Chiricahua	358	1986	417	1646
Natural Bridges	0	49	0	92
Organ Pipe Cactus	1020*	3355*	1175*	3410*
Rainbow Bridge	0*	20*	0*	20*
Saguaro	1760	4776	2340	4983
Sunset Crater	26*	1251*	120*	1308*
White Sands	3138	11270	2090	7532
TOTAL, Geol. & Biol.	6376	28917	6399	26041
Aztec Ruins	133	1477	218	1620
Bandelier	20	1159	64	1321
Canyon de Chelly	0	357	38	488
Casa Grande	2310	5538	1355	4113
Chaco Canyon	0	177	146	533
El Morro	0	171	2	274
Gila Cliff Dwellings	0*	10*	0*	10*
Gran Quivira	82	507	50	650
Hovenweep	0*	43	0*	10*
Montezuma Castle	336	1584	250	1492
Navajo	2	42	6	66
Pipe Spring	32	310	24	131
Tonto	578	1476	592	1855
Tumacacori	1065	2407	846	2494
Tuzigoot	508	2139	400	1364
Walnut Canyon	29	1526	228	1693
Wupatki	83	616	103	650
Yucca House	0*	27*	0*	20*
TOTAL, Hist. Sites	5178	19566	4322	18741
Total for January	11554	48483	10721	44325
December, 1940	7997	37743		

*Travel Estimated

100 ADMINISTRATIVE

120 Monument Inspections

Arches - Jerome Miller. (page 34)
Montezuma Castle - R. R. Maxwell. (page 34)
Tumacacori - Don Watson. (page 12)
White Sands - Joe Toulouse. (page 28)
Wupatki - John Peavy. (page 18)
Headquarters - Don Eggermayer; Drew Chick; David Jones; H. B. Chase; George Grant; Charles Krueger; Al Kuehl; Jerome Miller; Milton McCollm. (page 41)

130 Investigations of New Areas

Superintendent Miller and Naturalist Dodge investigated a proposed area near Bisbee, Arizona. (page 39)

150 Plans, Maps, and Surveys

Statements for Master Plans were prepared for the following monuments: White Sands, Sunset Crater, El Morro, Gran Quivira, Walnut Canyon, Casa Grande and Bandelier. (page 40)

160 Publicity

Copy for two-fold leaflets for Walnut Canyon, Montezuma Castle, Tuzigoot, Bandelier, Aztec Ruins and Tonto National Monuments was prepared. (page 40)

Arches - While in California, on leave, the custodian made 5 illustrated talks on the monument. (page 31)

Aztec Ruins - An essay on Aztec Ruins won a prize for a Colorado lady in the January issue of Desert Magazine. (page 20)

Gran Quivira - Custodian made a talk to the Alamogordo Rotary and plans to make others during the spring. (page 23)

Saguaro - Custodian made a talk on Chiricahua. (page 15)

200 MAINTENANCE, NEW CONSTRUCTION, AND IMPROVEMENTS

Casa Grande - Heavy precipitation put the sewage disposal plant out of commission. (page 20)

230 Special Improvement Activities

Bandelier - All units of Cabin E group, Hotel Development are complete; Office revision job complete; water line and tanks installed in fire lookout; butane system installed in hotel kitchen; Residence #4 completed to viga height; addition to Residence #2 begun; carpenter crew completed wood boxes, desks, etc. (page 8)

240 Monument Approaches

Several approach roads have been impassable, or nearly so, for most of the month, other roads have been blocked for as much as several days due to severe rain and snow storms.

300 ACTIVITIES OF OTHER AGENCIES IN THE MONUMENTS

320 Cooperating Government Agencies

Arches - Grazing Service is cooperating in a test of the water supply well. (page 30)

Aztec Ruins - Representative of the Federal Archives inspected the monument files. (page 19)

Canyon de Chelly - Indian Service is loaning equipment for grading the approach road. (page 9)

Navajo - Communication with headquarters made possible through the Indian Service radio system. (page 36)

330 Cooperating Non-government Agencies

Saguaro - University of Arizona is continuing its studies of the bacterial necrosis of saguaros. (page 14)

350 Donations and Accessions

Gran Quivira - Map of the "New" mission, fifteen herbarium specimens; framed etching of The Boss; Bulletin 127, BAE; 16 Kodachrome slides. (page 23)

Wupatki - Mr. A. E. Buchenburg donated \$1000 for excavation and stabilization of Wupatki ruin. (page 17)

400 INTERPRETATION

434 Archeology

Chaco Canyon - Threatening Rock fell on January 22. (page 31)

Tuzigoot - While stabilizing a wall, scattered infant bones and large sherds of an olla were found. These were left in situ as an exhibit. (page 16)

Headquarters - Identifications of prehistoric material from Aztec and Tonto made by staff of Los Angeles museum; Tonto and Casa Grande pottery repaired. (page 39)

500 USE OF MONUMENT FACILITIES BY THE PUBLIC

510 Decrease in Travel

A decrease of approximately 1500 persons from travel in January, 1940 was recorded. The principal factor in this drop is undoubtedly the severe storms which have occurred all over the southwest.

600 PROTECTION

640 Forest Fire Protection

Bandelier - Fire lookout is practically complete. (page 8)

Saguaro - The Forest Service can no longer help maintain the Manning Camp lookout. Two of the three lookouts have been called up by Selective Service and the third will probably be drafted before fire season. (page 15)

FIELD REPORTS

FROM THE MEN ON THE JOB

BANDELIER

By C. A. Thomas, Custodian
Box 669, Santa Fe, N.M.

Visitors this month, 20; travel year to date, 1159.

Again this month weather is about the only news at Bandelier. Snow falls have not been so heavy, but have come oftener. There have been few sunny days although temperatures have not been as severe as during last month. Twelve different storms brought a total of 19 inches of snow and 1.47 inches of moisture. Minimum temperature was 4 degrees on the 17th and maximum of 45 degrees occurred on January 1.

A memorandum from the director instructed that Bandelier should be declared closed to visitors next winter during December, January, and February. The weather man took things into his own hands and virtually closed the monument November 20 this year and has kept it well closed since. Our approach road is normally passable and in good shape nearly all winter, but this season, it has completely gone to pieces. For many days the only means of getting to Santa Fe was via the detour by way of the CCC camp and Los Alamos Ranch. The 16 mile section from the pavement to the Otowi Section early became a sea of mud by day and an area of deep canyons and craters by night. Many people (including Ranger Eden's part and Mrs. Frey's party) spent the night in their cars until released by "Mac" and the truck next day. Bad roads between the Headquarters and the CCC camp threaten to cut off the camp from the projects at the present time. One deep snow or a sudden thaw will do it.

Six cars bringing 20 visitors managed to reach the monument. A number of others were pulled out of the mud enroute and piloted back to the pavement.

In spite of the roads two truck loads of materials were hauled from Albuquerque and one from Santa Fe. The paint, lumber, linseed oil, turpentine and miscellaneous supplies and tools are being used on the maintenance of buildings project. Ranger Eden is working a crew of six men cleaning, painting, calsomining, and repairing the Lodge and monument buildings. Indoor work is progressing rapidly under Eden's direction, but it is "gonna break me" to buy fuel to keep the rooms warm enough for the paint to dry. It has kept two of us busy a large part of the time running the wood saw and hauling fuel to the residences.

During the lull in visitors, some projects that have been put off for a snow day were accomplished. I built some storage shelving in the garage at Residence #1, prepared copy for a two-fold informational leaflet for Bandelier, patrolled Otowi Section four times, prepared justifications for allotments, spent 3 days finishing the Fire Atlas, prepared a map of fish planting activities during past years, installed

larger heaters in the comfort stations, made four official trips to Santa Fe, Albuquerque, and Espanola, prepared a map showing mileage and location of trails, spent two days on research for museum cases and mechanical installation of display in Case #14, organized a night school for monument personnel, (course in Southwestern National Monuments), prepared a series of sketches for silk screen posters to be made in Berkeley, collected data for a butane range to be purchased for the hotel, built an artificial lake for a skating pond (by lantern light) and brought my filing up to date. Odd jobs - yes, but they'll help to make things run a lot smoother in the future.

Mac and Jim each have a list of accomplishments that put mine to shame. You see, we're sort of playing a game. Each fellow makes a job card for any little job he sees that ought to be done. The cards are put into the job file of the fellow who is responsible for that part of the plant or program. If materials are needed, they are estimated and the card goes to the custodian's desk for a purchase order next time a trip is made to town. As soon as materials are procured the fact is noted on the card and it goes back to the individual's file for his attention whenever he has the time to attend to it. When the job is completed the date, cost, and man-hours are entered and the card goes to a permanent maintenance file. Complicated, eh! Well, it works. And the system doesn't consume more time than doing the job.

I hope you'll excuse my overlooking that property check I promised last month. I'm not going to make many promises this time. Here they are-----I'll try to get at that property check; I'll put in a whole week on the museum (I promise, Dale). I swear I'll write copy for a mimeographed invitation for school groups to visit Bandelier, I'll prepare two papers for the custodian's conference (I say, aren't you throwing assignments around kind of reckless like, Mr. Richey); I'll attend the Custodians' Conference at Coolidge.

Mac promises to haul wood and coal, sweep and shovel snow off the roofs and plow it off the roads. Jim promises to keep the paint and clean up crew going and Pablita promises to finish the paintings for Case #17. That ought to keep us busy most of the month and if it doesn't, the weather man will probably let the bars down and deluge us with visitors.

Isn't it remarkable how much a fellow can talk without saying anything!

*****SYNEM*****

BANDELIER CCC

By James T. Fulton, Acting Proj.Supt.
Box 669, Santa Fe, New Mexico

Report of CCC Activities at Bandelier National Monument during the months of November and December, 1940, and January, 1941:

Adverse weather, poor roads, holidays, and an influenza epidemic have made carrying on of projects quite difficult and work production poor in quantity during the past two months.

All units of Cabin E Group, Hotel Development, are completed excepting for two or three man-days of painting. Wire was pulled in conduit and light fixtures were hung during this month.

The office revision job has been completed for some time.

The water line and tanks are installed in the Fire Lookout. One more coat of paint on the outside will complete this job. Unsuitable weather has prevented the application of this paint.

The butane tank and lines have been installed for the Hotel kitchen.

During the past three months over 3000 lineal feet of stone gutter have been laid along the entrance read.

Residence No. 4 is built to viga height with vigas placed on the back porch. The basement floor has been laid, as have the subfloors in the kitchen, dining and living rooms. Through courtesy of the U. S. Forest Service vigas for this residence were cut on the Ramon Vigil Grant.

The addition to Residence No. 2 was begun this month. Existing walks which were in the way have been removed and excavation for footings is in progress.

The carpenter crew has finished 8 hand-carved wood boxes, 36 curtain rods, and 12 hand-carved writing desks in addition to necessary work on the various jobs.

Two new stoves were installed in the shop heater room this month. After being adjusted, they heat the shop quite well.

A normal sized crew has been quarrying; and shaping stone throughout this period.

A small crew has been kept busy the entire month of January grading and removing snow from the road between the camp and the work projects.

SWM

CANYON DE CHELLY

By Charles D. Wyatt, Custodian
Chin Lee, Arizona

Visitors this month, none; travel year to date, 357.

Weather: Lots and lots of rain and snow which reduced the roads to a sticky morass and made them impassable except for the most urgent trips. At no time during the month has the roads from here to Ganado been in even fair condition. The total precipitation for the month

amounted to 1.52 inches in eleven different rains or snows spaced so that the roads never really became passable. Minimum temperature for the month was 13 degrees recorded on December 30th and the maximum of 52 degrees on December 29th.

Maintenance: Twenty-four man-days have been expended on road work so far this month and twelve more are to be used. This maintenance has been done on the approach road from Chin Lee and consists of graveling, grading, and the building of drainage facilities and one minor change in alignment. The Indian Service is cooperating on this work by furnishing the trucks, gasoline and grading equipment.

The septic tank was opened and cleaned during the month and the sewer lines inspected and found clear.

Beginning February 3rd maintenance work will be started on the White House Trail. This work will include surface repairs and the sealing of the tunnels.

The reclassification of the files along the lines of the regular Park Service decimal system was finally completed during the month so that now the writer, at least can find things.

Routine and continuing projects during the month will include visitor guide and contact work as usual and finishing the storm sash installation started many months ago.

Use of the Monument Facilities by the Public: With the roads in the condition they have been in all this month it is little wonder that we have had no visitors during the month. Mr. Adrian Ben Sinderen and his party of eight were planning on a trip but the elements have conspired to keep them close to the paved roads and our visitor register blank.

Administration: Two horseback trips were made up Canyon del Muerto by the Custodian. At this time of year the place is well named as not a soul was seen as far as Massacre Cave. One trip was made to the White House via the rim road and trail. The road is as bad as expected and will require a lot of work this spring. There is too much water flowing out of the canyon to permit a crossing by auto at the mouth so no trips were made up the north rim of del Muerto.

The Custodian made a trip to the tall timber above the sawmill to get poles for the proposed power line. What with a five inch snow and a deep thaw he was lucky to get out empty.

Personnel: The Wyatt family can report no accident during the month and only a cold or two to mar the enjoyment of a busy but solitary month. We are looking forward to the Custodians' meeting next month.

*****SWNM*****

WALNUT CANYON

By Paul L. Beaubien, Acting Custodian
Flagstaff, Arizona

Visitors this month, 29; travel year to date, 1526.

Four visitors were contacted in the museum, and eight were met at the Observation Point. None were known to have made the ruins trip. There are no Park Service visitors on record.

The only news here is that we've had lots of moist snow making the roads practically impassable except early in the morning when frozen. The County has had the snow plow through a few times but that does not eliminate the mud. Volcanic cinders are being placed on the worse places, and I expect to be able to travel back and forth to town whenever necessary.

I returned from annual leave the 16th and found everything O.K. except the roads. During my absence, reliable witnesses reported seeing a number of turkey tracks and one trail of a cougar in the snow. Since my return, I have seen, or have had reported to me, deer on the monument nearly every day.

Routine and Continuing Projects, and Projects for Ensuing Months:

Recently I cleaned some pottery sherds, and have had them identified at the Museum of Northern Arizona. If I learn to identify the types found here myself, I'll try to work over all the sherds for which the provenience is known. Possibly, I'll do some work on the nature trail signs.

SWMNM

MOUNT ELDEN CCC

By M. B. Stevenson, Proj. Supt.
Flagstaff, Arizona

Report for December and January.

December 3 - Company strength was reduced to 53 men due to ending of enrollment period. Of this number 30 men were available to the technical service.

Wupatki Side Camp was withdrawn November 30, except for watchman and carpenter.

December 11 to January 7, no work was done on projects due to inclement weather which made roads impassable.

The approach from U.S. Highway No. 89 to Walnut Canyon is now passable with chains although it is impossible to leave the main road at any point. Considerable work was done on this road during January.

January 18 - One hundred and forty-six replacements were received. These men will be available to the technical service January 27.

During the month, projects could not be reached. Foremen cooperated with the Army on wood details and making improvements, and

Park Service storehouses were rearranged.

Frank Morales was entered on duty as Under Clerk, December 1.

Mechanic Flaherty resigned January 17, 1941 and Mechanic Paul W. Conner entered on duty January 23, 1941.

Park Service visitors were Inspector Carl Taubert and Assistant Equipment Engineer George N. Keller.

SWNM

TUMACACORI

By Louis R. Caywood, Custodian
Box 797, Nogales, Arizona

Visitors this month, 1065; travel year to date, 2407.

General: Although rains and cold weather at the beginning of the month discouraged great numbers of visitors, better weather since has brought many. An unusual amount of moisture has fallen this year but no very cold weather has so far made its appearance. Despite this a heavy coat of snow was noted on the Santa Rita Mountains, some of which still remains after weeks. The Santa Cruz River was in flood for two days to almost summer rainy season proportions.

The days have been warm enough to make many of the plants and flowers grow. In the patio garden of the Museum, larkspur are blooming and the verbena and pomegranate bushes are beginning to leaf again.

Reports from visitors indicate that hotels and cottage courts in Tucson are full. The Nogales hotels and courts also report good business.

Administrative: Correspondence and filing have been kept current. The registration sheets are being sorted and filed in order by Ranger Harkins. Five volumes of the Park Service Bulletin were sent to the Western Museum Laboratories for repair. A report on the current condition of the Tumacacori Mission buildings was prepared with photographs and sent to Headquarters.

Maintenance and Improvements: Trees and shrubs in the patio garden and on the grounds were pruned and thinned. Parts of the patio garden were spaded and fertilized. Flower seeds were planted and some of the verbena and larkspur were replanted in better locations. The four olive trees were pruned and watered. Three of these trees are doing very well and the fourth, with care, is improving and sending out new shoots.

A hitching rack for horses was placed in the northwest portion of the parking area. This will accommodate horseback parties from nearby guest ranches.

Continued projects for the ensuing month will be maintenance of the grounds. Additional pruning and patio garden planting will take considerable time.

Visitors: An increase in visitor travel is noted with 1065 for this month. In January of last year there were 846 showing an increase of 219.

Two school groups, one from the Continental Public School and the other from the Sacred Heart School in Tucson, were guided through the ruins and museum.

Don Watson, Park Naturalist from Mesa Verde National Park, was the only Park Service visitor this month.

Information and Interpretation: Information concerning the annual Holy Week ceremonies and photographs were sent to Rose D. Meyer, Detroit, Michigan, for use in feature writing.

A number of inquiries for information were answered. Information leaflets were given to various agencies for distribution to winter visitors.

SWM

TONTO

By John Peavy, Custodian
Roosevelt, Arizona

Visitors this month, 578; travel year to date, 1476.

Weather and General: During this month weather was the most talked about subject along the Apache Trail. We have had 15 cloudy and 16 clear days this month.

When we returned from annual leave on the 5th, one of the most unusual and welcome sights greeted our eyes, every dry wash, latent spring and even slight depression in topography supported a stream of water. Roosevelt Lake had risen from a few hundred acre feet to over 400,000 acre feet at the present time and it is still rising.

With this abundance of water came an influx of visitors and a great increase in maintenance work to roads and trails.

The question often repeated in the past by interested visitors, "Where did the cliff dwellers go for water" has not been asked this month. We have had about 14 inches of precipitation here within the last 55 days.

Roads and Trails: The entrance road is rough but easily passable at the present time.

The trail to the Lower Ruins is in fair shape however the first $\frac{1}{2}$ mile of trail to the Upper Ruins is a total loss due to it's location in the canyon bottom which has been at flood stage several times during the last month.

Travel: At last the winter travel is in full sway. A greater percentage of my time has been spent in interpretation this month.

Ninety-three parties including 328 visitors visited the Lower Ruins, 8 parties including 25 visitors made the trip to the Upper Ruins, and

103 parties consisting of 398 individuals visited the Museum. They arrived in 194 cars of which 84 were from Arizona. Manila, Alaska, Nova Scotia, India, and England were represented this month.

Improvements: I built an 18' x 3' rock retaining wall against the terrace in front of the Museum. This terrace has caved and washed badly during recent rains.

Projects for Ensuing Month:

1. Three man days are to be spent on Lower Ruin Trail in leveling and resurfacing.
2. Sizing and redecoration of Museum room.
3. If hoped for museum cases arrive from Walnut Canyon, I will start arrangement of new displays per remitted plan.
4. Addition to eaves and roof repair on Museum building.

Present Condition of Ruins: The Lower Ruin is still in fair shape, recent storms caused no apparent damage.

Recent rains have caused slight damage to stabilization work in the Upper Ruin. Parts of coating on extreme outer walls was washed in a few places, however the damage is not serious and the work is standing up well considering that we have had three cloudbursts in the last month.

Closing: The Monument gives promise of showing the greatest floral display for at least seven years.

As a whole the area is in much better shape than a year ago and it begins to look like the traveling public has not let us down as we had previously thought.

SWNM

SAGUARO

By D. W. Egernayer, Custodian
Route 2, Box 544, Tucson.

Visitors this month, 1760; travel year to date, 4776.

General: Travel is up 660 persons above that of December, but almost 600 behind the estimated number of visitors last year. Disregarding last year's estimate, it is very probable that travel is considerably less, as business houses in Tucson complain of fewer winter visitors and decreased sales volume. Her are "Dude" ranches filled to overflowing as they were at this time last year, although hotels and tourist courts in town seem to be filled quite regularly. Out-of-state visitors to this monument have outnumbered Arizona travel more than two-to-one, a record for this area.

Weather continues cool, but not really cold, with quite a few cloudy and threatening days; rain fell on ten days of the month, with a total precipitation of 1.84 inches, exactly the same figure as last

month. Frost was observed on several mornings, and one lightning storm occurred during the period; this last quite a rarity in the winter time.

Administrative: One official trip was made during the month, when the custodian accompanied Assistant Forest Supervisor Sowell and District Ranger McPhaul, of the Coronado National Forest, to Headquarters to discuss fire-protection problems with Superintendent Miller (see Protection, below). Two trips have been made to Tucson to confer with the officers of the Coronado Forest regarding terms of renewal of the annual, cooperative grazing permits, four of which affect this monument.

Al and Bina Bicknell, of Casa Grande, constituted our only Park Service (and unofficial) visitors during the month. We were highly pleased to have them, as we have been trying to get our old "boss" down here ever since being transferred, so that he could have the chance of seeing a really primitive area (joke) - after some 23 years in Yellowstone, we suspect Al has seen about enough wild country to last him for some years to come.

Maintenance, New Construction, and Improvements: The new section of the monument road was dragged early in the month, after heavy rains had cut it up rather badly; contrary to their usual custom, the three creeks which cross this section of the road did not dry up in two or three days, but are still running nearly a month later, necessitating postponement of the filling of the "chuckholes" caused by them until they do stop running. The Broadway approach road to the monument has been in bad shape all month, as the county has not graded it since the heavy rain of December 30, which caused several wash-outs in the dips.

The shelves in the store-room were finally completed, tool racks made, and the storage problem solved - at least until more equipment is acquired. The fire-tool box, materials for which were purchased two months ago, has finally been built, and needs only the paint to complete it for service.

Our new entrance sign, donated by the University of Arizona, has arrived, and was set in place January 11, by a crew of workmen from the University Building and Grounds Department. This sign, 5 feet by 12 feet, mounted on steel rails concealed by Saguaro skeletons and set in concrete, is thought to be the finest entrance sign in the Southwest, and is certainly an improvement over the former battered tin monstrosity, as well as a most welcome Christmas (?) present. Our thanks to Dr. Atkinson, President of the University, for his kindness.

Plans for projects for the coming month consist entirely of hoping to contact most of the visitors who stop at the Monument Headquarters; the experience of last February leads one to believe that not much time will be available, during daylight hours, for other work this month. At least one, possibly two, days will have to be spent on road maintenance, and, if visitor travel does not come up to expectations, a start on the setting of the pump engine will be made, and the fire-tool box painted and lettered.

Interpretation: Of our total of 1760 visitors, 526 persons, or 29.9% were contacted at the Headquarters station. A total of 3185 minutes was spent in giving information to the 158 parties who stopped, for an average per party time of 20.2 minutes. Persons using the tables and fireplaces at the picnic area numbered 42 by actual count, with the probability that at least as many more were not counted.

On January 6, a talk on Chiricahua National Monument was given by the custodian to 55 members and guests of the All States Club of Tucson, at the El Rio Golf Club; colored moving pictures of the Arizona Monuments were also shown.

Protection: Revision of the Saguaro Fire Atlas was completed, with the exception of new Fire-Occurrence Maps, which are held up until sufficient copies of the base topographic maps of the area can be secured.

At the meeting with officers of the Coronado National Forest at Headquarters on January 6, it was learned that the Forest Service is withdrawing all financial assistance in protecting the forested sections of this monument during the fire season, with the result that all future protection activities, except detection cooperation, fall upon the Park Service. This is eminently fair and just, and our only regret is that this not unexpected news comes at a time when financial resources are at such a low point. The Forest Service has generously permitted the use of their tools and equipment now at Manning Camp Ranger Station for at least the coming season, and the use of Forest Service pack stock in pre-season packing of forage supplies to the lookout. However, the fact must be faced that sooner or later the monument will have to acquire sufficient equipment, and probably pack and saddle stock, to run on its own, and that to do so, considerably larger allotments for protection will have to be made. Currently, we are much exercised over the fact that two of the three men employed as fire-guards last year have been called by the Army for training, with the probability of also losing the services of the third man in the same manner; men of their ability and resourcefulness are going to be hard to replace, in addition to the difficulty of training new and inexperienced men, strange to the country.

Cooperating Agencies: Work on the study of the bacterial necrosis of Saguaro, being carried out with the assistance of the University of Arizona and N.Y.A., has again been resumed, after almost a month's inactivity due to the Christmas vacation and final examination time at the University. It is probable that some definite information on the extent of the disease in this area will be forthcoming within the next two months, as well as some definite information regarding the apparent disease of Organ Pipe cacti, which was noted, and is being studied by Mr. Paul Lightle on the occasion of a recent visit to that area.

New Equipment: A new, large size, renewable element oil filter for the Ford pickup was received and installed during the month. In addition, considerable repair work has been done to this car at a local garage.

TUZIGOOT

By Jack Cotter, Custodian
Clarkdale, Arizona

Visitors this month, 508; travel year to date, 2139.

Visitors: This month, 508 visitors saw the Monument, 108 more than the same month last year. Once more, Tuzigoot lost two visitor days during January because the 3/5 mile of approach road took on quagmire aspect during rainy weather and had to be closed.

Special Contacts: Again this month Clarkdale Public Schools sent busloads of young citizens to peer and hear at the Monument. The fifth grade arrived in two sections, January 9 and 10, and were briefly regaled on the subject of Indian pottery in general. They then drew forth paper and crayons and fell to sketching designs. Afterwards their labors were rewarded with a brisk canter through the ruins to see Tuzi, the infant burial, now a juvenile piece de resistance.

Note for the superstitious: On January 13, the monument was uneasy host to 13 visitors. That afternoon, the water main burst under the parking area. That evening, the custodian spoke before the Clarkdale Garden Club on the subject of the SWNM. 13 ladies appeared. This time, the tough luck was theirs.

Stabilization: For the first time, the NYA project quota of ten boys was reached during January. Of these, a crew of eight put in full time stabilizing the ruins. Nine rooms were completed, all of which required extensive repair. One room, Unit V, #25, was the scene of the accidental discovery of a number of scattered infant bones. The bones were uncovered while earth was being cleared from the base of a wall to provide for footing. The area had apparently been undisturbed by the original excavators because of proximity to the wall. The bones were left in situ and covered with boarding until they could be properly cared for. A second accidental discovery was made in the cave-in wall of Unit II, #15. In clearing around the base for restoration, a portion of the skeleton of a three or four year old child was uncovered. This, also, was left in situ until it could be glassed in and displayed as found. It is now protected by a temporary canvas covering.

The third and best-preserved find was made while stabilizing the east wall of Unit V, #23. Just behind the outer surface of this wall, which was composed chiefly of adobe, a pocket of large potsherds, representing what is probably a complete tall-necked olla of Tuzigoot Red ware, was uncovered in situ. The pieces were left undisturbed and the wall was stabilized around and above them. A large pane of plate glass was then installed in this frame, completely sealing in the pot, but allowing good visibility. The glass was inset so that the margins of the pane were well-hidden in adobe and behind rock. A covering of compoboard and plyboard was cut out to fit over the glass, so that the exhibit can be concealed and protected. Plan is to show the pot only

to visitors who may be specially interested.

While stabilization work was in progress, opportunity was taken to carry out recommendations of Dale King in stripping sections of fake restoration from the tops of the walls of Rooms #23 and 25, Unit V. This restoration, done by the original excavators, consisted of coursed flat rocks which sloped with the outline of the wall instead of matching the heterogeneously laid stones of the original sections. After this added section was stripped down to the original wall, the top was sealed with adobe mixed with water-proof cement, so placed as to match the original masonry and leave the top of the walls irregular. Incidentally, this treatment, while restoring the authenticity of the ruin, will prevent visitors from walking along the hitherto smooth tops of the walls. Even the ground squirrels have to watch their steps now.

Improvements: During the past month, the dirt-and-timber roofing of the 25-ft. sewer excavation at the foot of the hill below the museum started to cave in. The old roofing was removed, the pit was completely opened, and a temporary roof of planking and sheet iron was laid over the opening, pending the building of a permanent concrete top. Schemes were submitted to headquarters for the building of the sewer covering, laying two miles of new pipe for the monument water supply from town, and the graveling of the approach road.

Weather: More rain than is good for Indian ruins.

SWNM

WUPATKI

By David J. Jones, custodian
Flagstaff, Arizona

Visitors this month, 83; travel year to date, 616.

Travel: There was a 20% decrease in visitors this month as compared to January of last year. It was more noticeable at the Citadel than at Wupatki and is undoubtedly due to unfavorable weather conditions. At the Citadel 65 persons registered, Wupatki 32, duplicated names 14. Twenty-one of the visitors to Wupatki Ruin received guide service. Of the entire travel 56 persons or 67% were from out of state.

Weather: Wet! During the first part of the month this supposed desert more resembled a swamp what with low-lying fogs, rain and a light snowfall. Many visitors should be attracted to northern Arizona by the floral displays in May and June, unless the spring winds cause excessive evaporation.

Research: Highlight of the month was the formal acceptance of \$1000 from Mr. A. E. Buchenberg of Patagonia, Arizona, for research to improve interpretation at Wupatki Ruin. This generous offer comes at an

opportune moment, as it makes possible certain physical improvements that will add to the appearance of the ruin. At the same time much valuable information from an interpretive standpoint will result. A plan for the excavation was prepared and submitted.

General: Early in the month USDI 1241 was taken to Headquarters for an overhaul and replaced with 1261. After listening to our approach in this noisy little chariot, several people have asked whether the use of said pickup was part of the economy measure for defense.

In addition to the routine matters it has been possible to make several improvements in the filing system, to store more adequately sherd and geological collections in trays provided for that purpose. Considerable time has been spent in following fresh car tracks that suspiciously turn off the main road and go across country. There seems to be unusual activity of this sort on the Monument but no evidences of vandalism have been noted.

During the latter part of December we took four days leave, and in our absence Quentin Bradley stayed in the ruin.

A Navajo girl from Grey Mountain died at the hogan of Hal Smith on January 12. At Clyde's request Project Assistant Reuter, Enrollee McGorgle, and I buried her the next day in the same hogan with Peshlakai Etsedi.

Eddie McKee, formerly of Grand Canyon, gave a very interesting discussion of the Paleozoic formations of northern Arizona at the Museum of Northern Arizona seminar last week. Detailed notes were taken for the files of Wupatki and Walnut Canyon.

Stabilization: Work continued on the East Wall of Room 41 at Wupatki, but progress was slow due to inclement weather. It is hoped that the job will be 50% complete before the middle of February.

NPS Visitors: John and Marge Peavey visited Wupatki while we were at Headquarters. Their experience with the Flagstaff monuments this time was unfortunate - spending the night stuck in mud at Walnut Canyon and driving through our swamp only to find nobody home. Come again.

SWNM

AZTEC RUINS

By T. C. Miller, Custodian
Aztec, New Mexico

Visitors this month, 133; travel year to date, 1477.

General: The hottest news in northwestern New Mexico for the past several months occurred on the 22nd when the Threatening Rock in Chaco crashed to the ground and ceased to threaten any more. This custodian having been stationed in that National Monument for several years, and being the first to install the gauges to measure the movement of that

rock is greatly concerned and interested. It is just like losing an old friend, when that rock fell and went crashing into Bonito, the finest ruin north of the Great Valley of Mexico. We certainly sympathize with Custodian McKinney in the loss of the very best example of primitive Indian engineering in the Southwest.

Weather and roads have been bad for visitor travel this month. Only the most hardy visitor would make an attempt to visit our ruins. While our road and trails have been kept open and passable, travel in this section of the state has been unusually slow.

Weather: The month has been one of unusually great precipitation, which will benefit the range and the farmers much in spring to come. Minimum temperature of 8 degrees above was reached January 17; maximum of 56 degrees was noted on January 9. Precipitation totals 2.32 inches, much of which fell as snow -- total snow fall being 27 inches. At time of writing there is five inches of unmelted snow on the ground.

Use of Monument Facilities by Public: Total visitors to Aztec Ruins this month numbered 133, arriving in 44 vehicles. Of these, 35 were from within New Mexico, and 98 from out-state. 85 guide tickets were sold, making total revenues of \$21.25. These visitors were given 34 ruins trips and 33 museum talks. "Turnarounds" -- those who used parking area, but did not take guided trips numbered 12; people who stopped for information, but did not take guided trips numbered 20.

Activities of Other Agencies, Etc.: Mrs. Mabel Means, of the Federal Archives, Works Progress Administration returned for examination of old CWA records here. The annual Round Table Discussion and Banquet of the Durango Chamber of Commerce was attended by Custodian Miller and Ranger Alberts; this event had representatives of Chambers of Commerce and other community bodies from the entire San Juan Basin with attendance in excess of 300.

Projects: Routine, Completed, and Continued: Guide service has been maintained as usual throughout the month, with considerable snow removal and trail policing taking up much time. The Annual Insect report was made and submitted to your office. The water well was cleaned with slush bucket, pump line was pulled and new leathers put on pump. Electric motor and pump were overhauled. At the present time it is functioning in a satisfactory manner, but our water system installed in the deep well many years ago is completely worn out and we cannot expect it to run very long without a breakdown. A new pump and pressure tank is badly needed at this monument. No new equipment has been received this month, except a new maximum thermometer from the Weather Bureau. Service photos taken by George Grant this past summer were gratefully received from Washington Office.

Ruins and Stabilization: Some damage to ruin walls occurred this month (due to freezing and thawing); in all eleven sections of wall collapsed, including some in the middle "E", not far from the trail near the

central court. Rooms 177 and 153, each with original ceilings, have developed leaks, requiring constant snow removal. These leaks will be patched as soon as weather conditions become more favorable. Stabilization report has been completed on 23 more rooms, but more "after" pictures must be taken before report is ready to submit to Archeologist Vivian.

Personnel: Homer F. Hastings, Park Ranger, has been on annual leave since January 4. Homer is attending school at Gunnison, Colorado, during January and February. The Hasting family stated that it was 27 below zero at Gunnison when they arrived there. Later news from the Hastings was that the whole family are confined to their beds with flu. We surely hope that they are well by now, and that Homer can finish his schooling and get his sheepskin soon. Homer deserves a lot of credit for his splendid work here and is making an effort to complete his school work and at the same time continue with his Park Service career. Ranger Hastings was relieved by Relief Ranger Ed Alberts (better known to the old timers as the "Prince".) Ranger Alberts being already trained in the duties of a Park Ranger is batting a high average here at Aztec during Homer's absence.

Publicity: Aztec has received some notice in the press -- a short sketch of the ruins by Grace Morse, of Bayfield, Colorado, appearing in the Desert Magazine. This was a prize winning story in that publication's Landmarks Contest, and we may mention that the author is a frequent and enthusiastic visitor to Aztec and our other monuments. The usual number of inquiries for leaflets and other information from people all over the country, have been answered.

SWNM

CASA GRANDE

By A. T. Bicknell, Custodian
Coolidge, Arizona

Visitors this month, 2310; travel year to date, 5538.

Weather: The month of January was marked by unusual weather conditions. The rains which began in December continued and we are having more precipitation than we have had for years. The month started out with warm weather, our maximum temperature of 78 degrees being reached on the ninth. This warmth, together with the abundant moisture caused the orange trees around Mesa to bloom. The barley was also reported to be heading out with a very short stalk and there was some fear that it would have to be replanted.

On the night of the 11th we experienced a violent thunder and lightning storm during which we received 1.40 inches of rain. Of this amount 1.25 inches fell between 10:30 P.M. and 11:30 P.M. Our sewer system was put completely out of commission and the only lights we had

left were in the Headquarters office and in Teddy Baehrs' "office" out back. The Custodian and Assistant Superintendent Richey were up half the night trying to keep things from washing away.

The thunder storm seemed to break our warm spell and we had a decidedly cold spell from the 17th to the 21st. On the 17th and 18th the mercury dropped to 29 degrees, the minimum for the period. Several mornings of heavy frost helped to give us an unusual month as far as weather was concerned.

Total precipitation for the period was 2.27 inches, as compared with .17 inches during the January report period last year. Maximum temperature 78 degrees on January 9th; minimum temperatures, 29 degrees on January 17th and 18th.

Use of the Monument by the Public: Even with the decidedly adverse weather conditions which we have had this month we note an increase of 58% this year as compared with January, 1940. This year we have had a free museum and a free picnic ground and these facts help to account, no doubt, for the aroused interest in Casa Grande National Monument.

Out of our total of 2310 visitors, 1762 made the ruin in 209 different parties. The trips to the ruin averaged 46 minutes in length, and in addition to these we had one nature study tour of 15 people which required 84 minutes.

Lectures were given to 1088 people in the museum in 166 different parties, averaging 28 minutes in length. We note here a discrepancy of some 674 people in our ruin trips and our museum trips. We feel sure that nearly all visitors who go through the ruin also make the trip through the museum but heretofore we have been unable to verify this fact. This next report period we hope to get a check on the total number of visitors through the museum, both attended and unattended.

We sold 1551 tickets during the period, an increase of 18% over last year when we only sold 1256. There were 36 people passed, either Park Service or from cooperating agencies.

All states except Kentucky, North and South Carolina were represented here this month. From U. S. possessions we had visitors from the Philippine Islands and Alaska. Our foreign visitors increased a good deal this month, and we had representatives from the following countries: France, Belgium, England, Switzerland, Canada, South Africa, Ireland, and Australia.

Park Service Visitors: Don Egermayer came into Headquarters on business and donated a very fine specimen of a Tarantula which was a welcome addition to our display of Arizona reptiles and insects.

Visitors of Special Interest: Dr. E. H. Parker of Los Angeles was a visitor to the monument. He came out west 39 years ago, at the same time as Mr. Pinkley. He spent a few minutes talking over old times.

The Phoenix Union High School Nature Study class came out on January 11th and were conducted on a special Nature Study tour by Temporary Ranger-Historian Francis H. Elmore. Francis reports that they saw 15 different species of birds on their short trip.

1-20-41 A special War Department party visited the monument. They were inspecting proposed sites for National Defense air training fields in the vicinity of Coolidge. The site was to be fairly level and about 400 acres in extent. All modern facilities were to be installed. The party was made up of the following: Lt. Col. B. B. Cassiday, A. D., Washington, D. C.; Lt. Col. E. C. Kelton, C. E., Los Angeles, Calif.; Major D. E. Ellis, A. C., Washington, D. C.; Major H. F. Hannis, C. E., Washington, D. C.; Major D. M. Schlatter, A. C., Moffett Field, Calif.; Captain Maughm, A. C., Moffett Field, Calif.; K. J. Harrison, of the District Engineers office in Los Angeles, Calif.; R. H. Kelley, Washington, D. C.; Paul Loucks, Coolidge Chamber of Commerce.

Natural Phenomena: We note a decided change in the appearance of the Monument grounds. Our creosote bushes are showing seed pods and our salt bushes are displaying a great deal of new green. One can see grass almost anywhere on the grounds. Our saguaros are presenting a decidedly bloated appearance because of the abundant water they are storing.

Our Horned owls have been coming in for a lot of attention this month. Last year on the 25th of January the female started to lay and we have been watching them very closely to see if they would hold to the same date. Both of them were still out on the 25th. We have noted, however, a good deal more activity than usual. On two occasions we found bird feathers on the floor of the inner room, once those of a quail and once those of a dove. Apparently they have been enjoying good hunting this month.

General: Custodian and Mrs. Bicknell made their first trip to Saguaro National Monument this month. Now they will be able to pass on first hand information regarding that Monument.

Administration: January 6th saw the arrival of Temporary Ranger-Historian Francis H. Elmore to help us through the busy season. He was certainly more than welcome and entered immediately upon his new duties. Ranger Elmore has been working for Custodian Art Thomas at Bandelier.

The Custodian made two trips to Phoenix on official business during the period.

Maintenance: The repainting of the entrance sign was finished this month.

Work was continued on the addition to the Superintendents office and is about 90% complete.

On the 21st work was started to correct the damage done to the sewer system by recent flash floods. The pump has been overhauled and the motor rewound. The repair work is about 50% complete. Installation of a temporary power line and pump was necessary to care for the disposal of sewage while the plant was out of commission.

Routine and continuing projects will be the usual guide and contact work, and we will continue work on the projects named.

GRAN QUIVIRA

By Joe H. Toulouse, Jr., Custodian
Gran Quivira, New Mexico

Visitors this month, 82; travel year to date, 507.

Visitors: Our visitor count is about fifty percent ahead of this month last year, though the travel year is behind. We had one visitor from South Africa during this period, a Mr. George Oettle, who was sent on to Chaco Canyon; whether he arrived or not we have never heard. Had two overnight campers during the Christmas Holidays, they were connected with the Sandia School in Albuquerque. Other contacts were made during the month when informational leaflets were spread around to several of the filling stations in Mountainair, and further sheets were sent several Chambers of Commerce in New Mexico.

Weather and Roads: These have been alternately good and bad with good having a slight edge, and at the present writing both are in top shape. The weather being but slightly coldish and roads never better, for how long remains to be seen however.

Acquisitions: Received last period but was not acknowledged in December report a framed and mounted map of the "New" Mission to be hung in the restored room of the Mission for the visitors use. Fifteen more herbarium specimens mounted at Berkeley and identified by Benson of the University of Arizona were duly and appreciatively received. Received Administrative Manual No. 226 and entered it in the Property File. Framed lithograph of the "Boss" was received from Berkeley and duly hung in the office-quarters. Received "The Masterkey" from the Southwest Museum for this month. Also received Bulletin 127 from the Bureau of American Ethnology. Fourteen new kodachromes arrived from the Processer and were forwarded for binding, also two bound slides received which were reproduced from pictures taken by the "Boss" of the fireplaces right after excavation.

Routine and Continuing Projects: Finally finished the clothes line after obtaining four "eye-bolts" for stretching the wire lines, so this project can now be officially closed. Worked over the Property File and brought it up to date. Fixed flats on pickup and cleaned up Coleman lantern, and checked pickup putting in it shovel, axe and ashtray in accordance with Memorandum. Brought archeological survey maps up to date. Prepared five volumes of the National Geographic for binding which will be sent as soon as word is received that they can be handled at Berkeley. Made one trip to Alamogordo with two Mountainair Rotary Club members and spoke to the Rotary there on my day off. Worked over the herbarium specimens, cataloged them and made out Ethnobotanical cards for them listing them as to Family, have now in our files 31 species, and 14 families of plants from the Monument and its neighborhood, a good nucleus for further growth. Also cataloged several artifacts from the Surface of the monument as also other materials.

Received request for further information on Telephone line right-of-way; investigations were made and a report forwarded to Headquarters which is hoped will answer the questions put forth in the memorandum. Received during the month also was a copy of the proposed revision of the Propane gas installation for the Custodian's residence.

Projects for Ensuing Month: As soon as some idea as to cost of materials are arrived at for the Propane gas installation work will be started on this. Further work on the pottery sherds will be carried on in the hope that other restorable jars or ollas may be recovered, also cataloging of these various specimens. If weather permits it is anticipated that further archeological survey work will be furthered. As things now stand routine work of an official capacity is current and will be kept so, visitors handled as ever and even better (we hope). A lecture has been arranged for next month to the Ft. Sumner, New Mexico Rotarians and will be again handled on a day off, further talks of this nature are being anticipated for other towns on the approach roads to the monument. Cleaning of the restored room and graveling of the floor with waterproofing will be carried on as well as placing of the mounted ground plan within the room and preparation of several simple exhibits as we have had many requests for something in this room.

SWNH

CHIRICAHUA

By Frank L. Fish, Custodian
Dos Cabezos, Arizona

Visitors this month, 358; travel year to date, 1986.

Heavy rains in the latter part of December and early part of January were general over the entire region, some of the approach roads were in very poor condition for a few days, in fact one traveled about as fast sideways as forward. As this condition naturally reduced travel we show a decline in travel for the first time in about a year. While travel suffered the range and forest outlook is favorable for an abundance of growth in the early spring. Many stockmen are buying additional stock to take advantage of the prospective feed. Large numbers of cattle are going from Mexican ranches to Kansas, Montana, Colorado, California as well as Arizona, in fact about every other person encountered appears to be a cattle buyer.

The Out-of-State guests numbered 167 this year against 165 for January last year, making the entire loss due to Arizonans, probably they are more apt to shun bad road conditions, unless absolutely necessary. We have had many days of low hanging fog at the upper elevations of the monument. This has spoiled the visit of many of our guests as many panoramic views could not be seen.

The Christmas Issue of Arizona Highways contained an excellent written and illustrated article on the Monument and we have received

many favorable comments both verbally and written. Mr. Muench has sent a number of prints for us to select two for enlargement, he desires to donate the enlargements to us for decorative purposes in the museum.

Due to our personnel distribution, much of the Custodian's time has been spent at the Administration Building checking cars and giving those that desired it a bit of information on the Natural History of the area. On those days when it appeared visitors were not apt to arrive, parts of the day were spent on gutter cleaning along the roadway. While it was found eleven years in the Service has caused a physical deterioration, enough of the latent muscles were brought into play to accomplish some good, although there was a general reaction for a few days following.

During the month we received an etching of the "Boss" and a kodachrome carrying box. A geological specimen case was dispatched to Coolidge for Wupatki National Monument. Chevrolet Dump 1251 was transferred to Headquarters with a load of poles for Al's Ramada.

A. L. Scott of Bowie was given a permit to transport passengers in the Monument, he is now attempting to reach an agreement with the railroad for a franchise.

SWNM

PIPE SPRING

By Leonard Heaton, Acting Custodian
Moccasin, Arizona

Visitors this month, 32; travel year to date, 310.

As I remember it was snowing a month ago when I was making out my monthly report. Again we are having a good snow storm today. It began last night with a fine rain until morning when it turned to snow and at this time 9:45 A.M., we have 3 inches of new snow and still coming down.

The past month has been one of storm and mud, mostly MUD, between here and US 89. In fact from December 24 to January 5th, if one did not travel in the early hours of the morning while the roads were frozen, he had to have a cat pull them through the mud at Giggs' Flat for about $2\frac{1}{2}$ miles. In all we have had only about 7 days of good traveling weather and dry roads, then we had ruts so deep the cars would drag high centers.

Record shows that we have had 8 clear days; 13 partly cloudy; 8 cloudy days with 5 stormy days.

There has been very little travel this month due to the bad roads and storms. Have had 32 visit the fort. Most of these were from the CCC camp stopping over to kill time and to get out of the wet.

The work the custodian has been doing this month was the completion of the Sewer Line and Septic Tank project started by the CCC in 1939. The building of a temporary garage and work shop on the south side of the monument near the residence building. This building is about 75% complete. Have the shelves and work benches to install.

Have done some work on the signs for the monument, dragged the roads within the monument and hauled some sand on the muddiest parts, installed a 32 volt light plant for use in the residence building, sent in to Headquarters several volumes of pamphlets and reports to have bound at Berkeley.

We have all had our turn at the flu this month and are all over it except one of the small children who had the typhoid fever last fall. He doesn't seem to be getting along as he should. Otherwise we are all OK.

SWM

ORGAN PIPE CACTUS

By William R. Supernaugh, Custodian
Ajo, Arizona

Visitors this month, 1020; travel year to date, 3355.

General: The weather this month has been good for the most part and although a few rains have occurred, travel has been increasing regularly. Heavy rainfall in the last part of December brought the total rainfall for 1940 over fourteen inches for this area which makes it an exceptionally wet year. Although the dampness has made it seem cold there has been no freezing weather and only light frost.

Several days have been spent with Pima County Engineers and Supervisors working out road right of way problems. It is now believed that this will be secured by the county within the next few days.

The entire month has been spent on routine patrol and road repairs after the heavy rains, and while a man can keep more than busy at this there seems to be little to report for the month.

Wildlife: Since the rains all wildlife can be seen over the entire monument. Many reports of peccarys and deer seen along the highway have come in. Exceptionally good fishing at Rock Point is reported.

Continued and Future Projects: February will be spent on the same routine patrol work and patrol duty.

SWM

WHITE SANDS

By Johnwill Faris, Custodian
Alamogordo, New Mexico

We have a grand start on a new calendar year in more ways than one, a visitor increase over last December of over a thousand, an increase in cars of 288, a new ranger well broken in and all my men hitting on all eight to catch up odds and ends and still take care of the current duties. Some day maybe we will catch up on the many things

we had to forego this past summer. Repairs, maintenance, etc., are taking shape and really we have a nice start. Weather conditions have been on the whole very good. Fort Bliss which is only a hundred miles away has been giving us a big play and the boys who are now stationed there, coming from all parts of the United States, have sent the glad news back to their folks at home to come and see it for themselves. This has had no small part in bringing in visitors from a number of states. I see eighteen states together with Mexico, Egypt, Canada and Hawaii on our register. U.S. 70 our main artery has been actually shut off and the traffic detoured around this section. So that in spite of many adverse conditions we have been going strong. Our museum has been in constant use, almost like the summer season but little contact has been possible in our attempts to catch up on the outside work.

We again have been fortunate in being able to hit the front pages on publicity. Several other sources are going to prove of potential worth, Fort Bliss being perhaps our best source. Not only are we pleased to have so many from the Fort but it is really a pleasure to meet the boys and officers and see how adequately we are being prepared on man power. One could not hope to encounter a nicer group anywhere.

Several minor verbal complaints have been received such as, no coffee or lunches at the concession, slick roads, no heat in the museum but all were given in a good spirit and no feeling resulted in any case. Tom's concession is operating daily and no complaints are received.

Much of our time this month has been given to maintenance problems. Wet weather made some road work imperative and a per diem laborer was employed several days in this connection. We hope that with this sanding of our slick stretches it will tide us over until we can really put in some man-days on this work.

Contracts have been let by the State on the Mescalero portion of U.S. 70 and for better than a week this road has been blocked off entirely through the reservation. This certainly does make a difference in our visitor count. But when the improvements are completed it will without doubt aid us materially and of course we are looking forward to its completion.

The Division of Grazing has just finished their survey of this general area and are furnishing us with maps showing many features heretofore unavailable. We are grateful to the Division of Grazing for this service.

The State of New Mexico planted nine antelope within our boundaries and we certainly are pleased with the herd. We have had the misfortune of losing two. One possibly from injuries suffered while enroute and the other very definitely a victim of loco weed. The last report on an inspection of yesterday indicate that the remainder of the herd are well settled and getting along fine.

We are in receipt of a slide illuminator and two slide holders from Berkeley for which we are much pleased. Office equipment and supplies from Coolidge have been received so that we are starting the new year well equipped along this line.

We are still looking forward to our lights from Berkeley and also the remainder of our museum cases, especially number ten.

Probably one of our most pleasant surprises was on Christmas Day when few visitors were expected. Who should drop in but Mr. Tolson and Mr. Weems. We were glad to see them and enjoyed their visit of two or three hours with us. Joe Toulouse was in with some of his friends from his part of the country. By the way I hear some mighty fine reports on a talk that Joe gave the local Rotary Club. Congratulations, Joe.

Bob Upton made one official trip to El Paso during the month and George gave a talk before the Fellowship Club in Alamogordo. About twenty were present. The boys are working hard and I certainly do appreciate the work that is being done.

SWM

EL MORRO

By Robert P. Budlong, Custodian
Ramah, New Mexico

During the latter part of December and early part of January the custodian was absent from his station on leave. The return trip from Gallup was accomplished in sixteen hours -- a speed record for this time of year. Now even the mail is unable to get through with regularity.

Weather: Miserable. Snow fell to a depth of 24.25 inches during the month. Maximum temperature was 55 degrees on the 8th; minimum was three degrees below zero on the 7th. We rather expect winter to come along any day now. Much of the snow has melted and gone into the ground-- some of the neighbors insist penetration of moisture is as much as six feet below the surface.

Transportation: None. During the custodian's absence the official truck surrendered its clutch. It will need repairs, but we can't get the job done without materials, and at this writing have been unable to obtain the materials. We are hopeful, however, for if things get any wetter the custodian can build a boat and get out to civilization with far less difficulty than usual.

Housing: During the month the furnace flues and chimney were cleaned out, using an old set of worn-out chains and some rope, and the furnace can now burn without much difficulty. Due to the unseasonably warm weather, we have been keeping the fire low, and excessive sooting-up of flues and chimney resulted. The winter's supply of firewood for our wood-burning stove is all split and stored under cover. The last of the coal -- about seven or eight tons -- that had to remain in the garage since capacity of bin in the cellar was limited, has now been moved into the bin and the cellar. Shelving has been installed in the cellar for storage of canned-goods. The homemade cellar in the hillside, used for storage of winter vegetables, has been repaired.

Communication: The radio functioned well during the custodian's absence, and we wish to extend official and personal thanks to Custodian McKinney for his great assistance via radio in problems arising during the custodian's absence. Some minor difficulty developed with the transmitter, which the custodian traced-down and repaired upon his return. No further difficulties have been experienced, and this two-way communication with civilization (via Chaco) is quite a relief.

Prior to the custodian's departure the bank of batteries and a gas-engine-operated charger were installed in a "doghouse" from which wires lead into the house, via fuse blocks and switches, to the radio. One merely opens the doghouse, presses a button, and the charger does the work, automatically stopping when batteries are fully charged. Two emergency lights (we might have more than one emergency) have been installed in the residence, to run from the 6-volt current. The shelter, or "doghouse" for the charger, excites much curiosity among neighbors. It is equipped with hinged shutters which, when open, permit circulation of air to the air-cooled engine. When closed and locked, questions are raised as to what-is-it. The custodian has made a small nameplate, with gold letters on a stained-wood background, and affixed this to the doghouse. This seems to answer most of the questions. It bears the name "Yehudi."

There really is little to report. We should not omit mention of some items omitted from last month's report, however: trail cleanup last month was completed and the monument is spotless. All left-over cleanup-jobs from trail construction were finished; washed-out places in trail repaired; broken places mended and resurfaced; all old signs removed; old piles of sand and gravel removed; the enormous pile of chips left over from peeling of bridge logs removed from the monument; drains in the trail that had clogged on the north side were opened and repaired where necessary -- great amounts of work were accomplished, and the monument was put to bed for the winter in perfect condition. When spring comes and we can find it again we expect to find it looking better than ever before.

ARCHES

By Henry G. Schmidt, Custodian
Moab, Utah

Visitors this month, 42; travel year to date, 660.

Weather: The first part of the month was spent in California, on annual leave, and I am unable to vouch for the Utah weather during that period. However, I will pass on the word of our Moab friends and report two weeks of snow, rain and blustery weather. Since our return to Moab, the weather has been clear and warm, with just a day of snow and rain. We didn't bring this sunshine back with us from California; it is just a sample of the weather ordinarily enjoyed in southeastern

Utah during the winter. We can't boast about our roads, but we do boast about the climate.

Roads: There are, at present, nine miles of parallel ruts leading into the Windows Section of the monument. The abnormal amount of precipitation during December, plus the recent warm spell, left portions of the road in very bad condition. It is still possible to navigate the entire distance during the daylight hours without a great deal of difficulty, which condition, according to my guess, will place us next to Chaco and El Morro in the road classification. Lack of man-power at Camp NP-7-U has slowed down the road maintenance during the past month, however, the recent arrival of enrollees assures us of immediate continuation of work on the road and it can easily be put in good condition within a month.

The road to Devil's Garden and Delicate Arch sections, via Salt Valley, is impassable at present. A few more warm, clear days will help dry out the mud and patrol of these sections by car will then be resumed.

Visitors: A few out-of-state visitors skidded into the Windows Section this month and kept our visitor count from dropping down to nil. A total of 49 visitors signed the register at the end of the road and of this number, 23 were from Colorado, 9 from California, 6 from New Mexico, 3 from Texas, 3 from Illinois, 3 from Utah and 1 each from Washington and Alaska.

Seven parties, with 26 visitors were conducted through the Windows Section.

Project Progress for the Month: Road maintenance, although urgently needed, was cut to the minimum during the month. The CCC maintenance project was suspended until the new enrollee replacement arrived. I have been able to repair the boggiest spots in the road and have kept the road open and passable in spite of the weather.

Routine patrols were made to the Windows and Courthouse Towers sections. The patrol to the Windows section was made several times each week in order that I might assist any visitor who may have lingered too long in one of our mudholes.

A test on the headquarters area water supply well has just been started. The equipment is in place and ready to run and we hope to be able to make a favorable report on the productivity of this well in the near future. This project was made possible through the cooperation of Mr. Fred Jewekes, Superintendent of the Grazing Service CCC camp at Dalton Wells, and Mr. James Andrews, District Grazier, Moab, Utah. They arranged to lend us the use of the water line and pump necessary to do this work, and were of assistance to us in setting the equipment in place.

Correspondence and reports are up to date.

Projects for the Ensuing Month: Maintenance of the Windows Section road, with particular attention to the sections which are draining slowly after each storm and each thaw.

Completion of the tests on the headquarters well and reports to the superintendent.

Reconnaissance of the new road, from Courthouse Wash crossing to the Balanced Rock.

Routine patrols of all sections of the monument.

General: The recent trip and vacation in California gave me a chance to try out my collection of kodachrome slides of Arches and vicinity on quite a number of people. During our stay in California I gave 5 illustrated talks to 193 people. The largest gathering appeared at the Visalia Lions Club meeting, where the slides were shown to 62 members and visitors.

Associate Engineer Miller spent several days at the monument, flagging out a preliminary line from the head of Courthouse Towers to Courthouse Wash crossing.

We end this report with the expression of hope that we will see all of the "Outfit" at Coolidge, some time during February.

-----SWNM-----

CHACO CANYON

By Lewis T. McKinney, Custodian
Chaco Canyon, New Mexico

Visitors this month, 0; travel year to date, 177.

Weather: Lots of it. Minimum - 5 degrees, Maximum - 62 degrees, Precipitation - 2.46 inches, with 5 inches of snow included.

Roads: None, all detours.

Threatening Rock: None, no threat, no more. Thanks to all of the Technicians who helped me with this minor problem.

Park Service Visitors: None.

Progress for the Month: Two miles per hour, in auto, on horseback or foot.

General: Pain, snow and mud.

****SWNM****

MOBILE UNIT

By Gordon Vivian, Foreman
Chaco Canyon, New Mexico

Throuthout the first three weeks in December work continued on Pueblo Pintado some 20 miles to the east. There 19 foundation jobs had been completed and two more were in progress. With increasingly severe weather this and all other job 20, outlying ruins, projects were abandoned for the remainder of the winter. All materials and equipment were barged down to Bonito through the mud during the week of the 23rd. With closing down this leaves the work at Wiji about four-fifths completed and that at Pintado roughly one-fourth done.

Thus far in January the Mobile Unit has become less and less mobile until we are practically a stationary unit. The roads are more or less impassable and our only ventures out have been wood details for the camp. It's always a question of whether it's better to stay here and freeze or go out and get stuck since the last truckload of wood took four days to get in. Breakdown of equipment hasn't been much of a help either. We haven't finished sanding the two plazas at Bonito since there's nothing to haul sand with; what little oomph is left in the equipment has been saved for wood details.

Up to this last week no work has been done on Bonito itself; the crew has been kept, when they could get outside, on preparation of materials for future support work. This and repair of tools and equipment. What work was done on ruin has been confined to minor support and maintenance in the southeast corner and remodeling of the two rodding basins in the last plaza.

Nothing has been done to date to repair the damage caused by the fall of Threatening Rock. We are photographing the disaster from all angles and Foreman Boone is preparing drawings covering the destroyed portion.

-SUM-

CHACO CANYON CCC

By Claire J. Mueller, Acting Proj.
Supt., Chaco Canyon, N. Mexico.

This past month has been a bad one in the "Land of the Chaco." Rain, sleet, and snow have caused us no end of trouble. However, it is actually the mud and impassable roads that have kept us from working.

During this month we worked only two days, and then the snow started to fall again.

The most noteworthy and news-making event out here for the month, and possibly for the year, was the falling of "Threatening Rock." It fell January 22nd about 3:25 P. M.

Foreman Hayes has started the El Morro sign project and is making good progress.

A load of culvert pipe for the new headquarters road came in this

month and when the roads become passable again, the remainder will be brought out.

Project Superintendent Phelps and Senior Foreman Lamborn have gone to Albuquerque and Santa Fe to bring back a few new trucks. Needless to say, these will be a welcomed addition to this camp's equipment.

Inspector Raymond Higgins braved the mud and ruts on January 10th to pay us a visit. He was the only visitor for the month.

SWNM

CAPULIN MOUNTAIN

By Homer J. Farr, Custodian
Capulin, New Mexico

Visitors this month, 25; travel year to date, 5550.

Am sorry to report the amount of visitors to this monument for January 1941. There have been but twenty-five. Many inquiries about the road in the Park during the month but all were advised not to attempt it. A blanket of snow from thirty to forty inches have been all over the country here since November 24 and while the south side of Capulin Mountain has been open to travel the North side has been closed all winter. Through the good offices of the State Highway Department I was able to get the local Highway machinery to open the road all the way to the top but this was blown over and in worse condition than ever within forty-eight hours. Therefore, we have not even attempted to open it again. We now have some six feet for about three hundred yards along the road and this is too deep and hard to plow. When warm weather comes, probably next month, we will be able to get it off.

Weather has been very bad most of the month with about eight or ten inches of snow on top of what was already the largest snow in forty years here. School buses in this community and near by Kiowa have been able to go only part of the time. The State Highway has lent a helping hand many times only to have the roads all blown or snowed full again.

Wildlife does not seem to be so plentiful this winter in the park as in the past. I presume it is due to the extra amount of snow. The birds and deer may have moved toward the Folsom community about ten miles to the northeast where there is very little snow, although I see a few deer now and then and some blue birds.

Routine and Continuing Projects: The big snow has broken down the boundary fence in several places and the travel (even though light) has managed to cut deep ruts in the road near the foot or base of the Volcano and this has kept the Custodian busy hauling gravel and dragging the ruts full and repairing the fence.

Projects for the ensuing month will be to open up the road all the way to the top of the rim that the travel may resume again.

MONTEZUMA CASTLE

By Earl Jackson, Custodian
Camp Verde, Arizona

Visitors this month, 336; travel year to date, 1,584.

One hundred forty tickets were sold and 33 children went into the Castle free as under age, so that a total of 173 visitors entered the building. No complimentary passes were issued. Visitors arrived in 97 cars, of which 34 were Arizona cars. Twenty-three states were represented, and one foreign country, Venezuela.

One Park Service visitor arrived during the month, R. R. Maxwell, Associate Agricultural Engineer, Region III, on January 8.

Weather and Roads: Temperatures have been about normal for this season. with a maximum of 66 degrees, a minimum of 22. Mean maximum reading is 56.83, mean minimum 30.45. Thirteen cloudy days and four partly cloudy have produced a great deal of morning fog and 2.10 inches of precipitation. The rains have been warm, with no snow. This moisture, coming on top of high precipitation for December, has left the earth quite thoroughly soaked, and the country is looking in fine shape. In the vegetable kingdom the winter annuals have burst forth into an orgy of growth, and the wild mustards down in front of the Castle make the area look like a mountain meadow. Beaver Creek, while having no really high floods, has reached flood stage several times, and has kept a consistently high level for two months.

Gravel and dirt approach roads have been wet and very slippery several times this month. WPA road work continues near McGuireville on our main approach three miles away, and visitors complain the short detour at that point is very slippery in wet weather.

Snow and rain in the mountains on December 31 caused landslides in two places on Highway 79, between Prescott and Jerome, and between Sedona and Flagstaff. I was told both these main entrances to the Verde Valley were closed for a number of hours to general traffic while repair crews removed dirt.

The Lakes route from Flagstaff is closed by snow, as is usual in winter, and travel from Roosevelt Dam via Pine and Payson is negligible.

Routine and Continuing Projects: . In the office, all last year's files were removed from active duty and bound, and the periodicals in the library collection were also similarly treated. Our filing system is up to date until some other change is ordered.

2. Ranger Baczuk painted and set up two more signs, one a "no trespass" sign for the undeveloped east end of the monument, where we have difficulty keeping wood haulers and hunters from wandering, another a dangerous ledges warning for a trail going westward from the ruins group just west of the Castle, "Castle A," as we call them.

3. In "Castle A" it was found expedient to board up a ladder leading into the higher cliff levels of this ruined structure, for so

muck crumbly rock is ready to fall that visitor protection demands the section be closed.

4. Some pigeon hole bins were made and installed in the garage workshop section for storage of nuts and bolts, nails, screws, etc.

5. An additional eight loads of gravel were hauled in the pickup truck and spread in soggy places on trails and on the roadway between the parking area and the Castle trail.

6. The principal job accomplished this month, and which I modestly admit Ranger Baczuk and I have done up in good shape, was the stabilizing and repair of the ruined walls in the "Castle A." We spent 20 man-days capping wall sections with mud, chinking holes and cracks in the walls, and building about three cubic yards of rock and mud wall in places where it was imperative to prevent original walls from falling. I think these ruins are in condition to last another year without further repair. They are situated in very rotten crumbly limestone, have never before been repaired, and at the very best cannot last very long without development of new techniques for preservation. The repair job was done at a cost of \$2.55 for materials. No labor was hired. With travel slack, we both worked out of uniform, taking visitors when they came and explaining why the no uniform. Tourists seemed quite impressed to see us saving Uncle Sam any labor cost on this job. Too bad more tourists can't see the countless ways in which the whole Southwestern Monuments gang struggles eternally to save a cent here and a cent there; such examples are balm to taxpayers' eyes.

7. General maintenance and cleanup were kept current. With the completion of the job referred to above, ruins repair in "Castle A," we thoroughly cleaned all the trail system through the ruins, cleaned out the Nature trail once more, and did some more natural landscaping on the main Castle trail.

Personnel: The Custodian took December 29 as sick leave with high fever. Think I bluffed out the "flu" by doing it.

Acquisitions: Seventy mounted herbarium specimens were received back from Western Museum Laboratories, and await receipt of herbarium folders before being correctly placed in the herbarium.

Two filing drawer boxes were received during the month.

Miscellaneous: Monument patrols during the month reveal no new evidences of vandalism or wood cutting. The monument is looking in pretty good condition.

Visitors, while comparatively few in number, have been for the most part intelligently interested. There were no campers, and only 16 picnickers.

Work has progressed satisfactorily during the month. During the following month we hope that it will be possible for Naturalist King to come up and help us install our museum cases. If he doesn't, and until then, we will work on other projects. Some repair work will be done in Montezuma Castle, to make the building shipshape for another year. A ladder should be erected to an interesting cave in the

"Castle A." A sunken part of the parking area road, where it has been crossed by pipe lines, will be repaired. Time allowing, excavation work on four fifty feet long trenches for ground wire will be done at the point where our underground conduit joins the 6900 volt line of the power company.

SWNM

NAVAJO

INFORMATION FOR THE JANUARY MONTHLY REPORT

January 30.

We had another "first" in the Southwestern National Monuments today, when we talked to the custodian of our most remote area, Jimmie Brewer at Navajo, by radio and long distance telephone. The connection was made with Acting Superintendent Richey through the Central Navajo Agency, Window Rock, Arizona.

Jimmie and Sally have been snowed in since January 18, and their only connection with the outside world, except by radio, is through "Pipe Line," Jimmie's Navajo Indian laborer, who brings them the mail occasionally by horseback. Jimmie reported that both he and Sally were well, and that the skiing was fine. They are both planning on being at the Custodian's Meeting, and if they are still snowed in at that time, they have arranged through "Pipe Line" to get horses to get out to the main road. Jimmie said that he had mailed his monthly report today by way of "Pipe Line" but doubted if it would reach Headquarters in time to get into the Report. The following information for the Navajo January report came in from Jimmie by way of radio:

"Visitors - 2, prior to January 18.

Inspections - One trip was made to Inscription House prior to the closing of the entrance road to inspect road construction being done by the Indian Service in the vicinity of Inscription House.

Roads - Closed from approximately January 18.

Weather - 21 inches of snow have fallen during January. Snow depth is now approximately 18 inches. Skiing excellent."

It certainly was a relief to hear from Jimmie and Sally and to know that they are all right. It is a comfort to us here at Headquarters to be able to make contact with our most remote monument, and to know that they can get in touch with the outside world in case of sickness or accident.

/s/ Charles A. Richey

Note: Jimmie's monthly report has just come in and will begin on the next page. -- C.A.R.

By James W. Brewer, Custodian
Tonalea, Arizona

INSCRIPTION HOUSE ROAD REPORT: After advice from your office that a road was being constructed down into Navajo Canyon near Inscription House we made a reconnaissance.

There is a cut-off road four miles south of Shonto that joins the Rainbow Bridge road about four miles south of Inscription House Trading Post at the Kaibito cut-off, leading west. Following the Kaibito road for four miles you come to a new fork to the right; this is the start of the new road. From the fork it is ten miles to the canyon floor at the confluence of Jones Canyon and Navajo Canyon. (Jones Canyon is the next tributary to Navajo below Nitsin Canyon; thus the road passes the mouth of Nitsin Canyon.)

The road is of "construction" type and the last three miles are a little bit more than one should expect a modern passenger car to navigate.

Mr. Rhodes, of USIS, informed us that the road work was done hurriedly in order to get the caterpillar tractor and air compressor into the canyon before rough weather set in; he added that, as the cat was brought out, the road would be improved.

Mr. Rhodes is in charge of the project which is responsible for the construction of this road--a dam being built across Jones Canyon. A spill-way is being blasted into the north rock face of the canyon; water eddying behind the dam will allow the silt to settle in the channel and check further erosion of the canyon floor.

We also contacted Paul Begay, delegate of District 2, who told us that a dam in Nitsin Canyon might be projected. Paul says that about sixty Navajo families live in this part of Navajo Canyon and tributaries, and he is trying to get a day school established in the Canyon; this would of course mean maintenance of an automobile road.

The present road crosses the water course of Navajo Canyon through a deep trench scooped out by a bulldozer; the nature of the loose material of the banks does not suggest much permanency; however, without crossing the water course one can drive within half a mile of Inscription House. Should a bridge be constructed, or a crossing maintained, the visitor might drive right up to the Monument boundary.

As you know, it has in the past been difficult for the Custodian, stationed at Betatakin (Headquarters Area of Navajo National Monument and 30 miles from the Inscription House area) to properly protect Inscription House. Its only protection has been that it was too difficult of access to tempt the average visitor. With the opening of a road to within one-half mile of Inscription House it becomes important that a seasonal ranger position for this area be considered.

Photographs were taken to show the character of the road and its proximity to Inscription House. A sketch road map was also prepared by this office, in stencil form, to supplement this written report. A request is made to run an additional 200 of these maps--they will come

in mighty handy in explaining topography, roads, and turn-offs to visitors to this Monument.

Radio: We have been in twice-daily contact with USIS at Window Rock. The local Navajos have been encouraged to come in at 10 A.M. Saturday to hear the broadcast in Navaho. Pipeline usually attends and brings our mail in by horseback.

General: With snow as deep as it is today it is impossible to get out of here by car; if Pipeline comes out you will receive this report. We have enough food to keep us for two months, but expect to get out for the Custodians' meeting in February; when we drove out on the 20th we took some clothes to Shonto, so if we are snowed in when we want to leave for the meeting we can go out horseback, ski, or snowshoe and not be heavily loaded.

SUNSET

SUNSET CRATER

by David J. Jones, in charge

Visitors this month: 26; Travel year to date: 1251

Travel A Total of 12 persons registered at Sunset this month, which on the basis of previous observations would represent only 50% of the travel. Of the visitors, 75% were from out of state.

The great decrease in travel to Sunset this month is easily understandable as snow has drifted across the road in many places. Until the 22nd of January no one registered. The road is not impassable but the drifts are precarious without chains.

General Suggestions for an interpretive program at Sunset were submitted to Naturalist Dodge on the basis of which he prepared an excellent statement for the proposed master plan.

Plans for two re-inter boxes and stonics have been completed and it is hoped to have them finished within the next two months. One will replace the one in use at the base of the crater, the other will be installed at the summit.

BRANCH OF HISTORIC SITES

By Dale S. King, Archeologist,
Coolidge, Arizona

PERSONNEL

Archeologist King spent the greater part of the month in the office working on copy for Master Plans and two-fold leaflets. He worked up a schedule and other preparatory material for the annual Custodians' Meeting scheduled for mid-February. He made one field trip to Chaco Canyon to determine the damage done to Pueblo Bonito through the fall of Threatening Rock.

Archeologist Steen was in the office throughout the month compiling and processing the Superintendent's Monthly Report, working on the photograph files, preparing copy for Master Plans, and re-arranging the pottery storage shelves.

Assistant Naturalist Dodge spent the entire month in the office except for two field trips, one to Bisbee with Superintendent Miller to report on a box canyon at the request of the Washington Office, and one to Phoenix as a Service representative at the State Wildlife Federation Conference. In addition to correspondence and similar routine duties, Dodge completed editing a 300-foot motion picture reel for Organ Pipe Cactus, revised the two 400-foot National Monuments reels, completed the index for Monthly Reports for the period 1926-1940, took photographs of flood damage to Casa Grande utilities, completed interpretative program outline for Sunset Crater and White Sands Master Plans, gave three extension Service talks to a total of 141 people, completed preparation and processing informational leaflets for Natural Bridges and Hovenweep, completed an article on the owls of the Casa Grande for the Region III Quarterly.

110-NEW OR UNUSUAL ACTIVITIES; CONFERENCES

The staff was represented at the State Wildlife Federation Conference at Phoenix on January 11. Considerable preliminary work was accomplished in preparation for the Custodians' Meeting in mid-February. Administrative photographs were made of flood damage to utilities at Casa Grande. Technical assistance was solicited for analyzing considerable prehistoric materials obtained in the stabilization of the Upper Ruin at Tonto.

130-INVESTIGATION OF NEW AREAS AND BOUNDARIES

Assistance was rendered to the Superintendent in making a survey of a box canyon near Bisbee on January 9-10.

150-PLAN AND PROJECT STUDIES; TECHNICAL AID IN DEVELOPMENTS

Interpretive program outlines were completed for the Master Plans of White Sands, Sunset Crater, El Morro, Gran Quivira, Walnut Canyon, Casa Grande, and Bandelier.

412-PUBLIC RELATIONS

Western Museum Laboratories were contacted regarding the preparation of silk screen posters featuring Bandelier for display in northern New Mexico cities. Projection slides were loaned to Mr. Frank Evans of Indiana, Mr. A. E. Buchenberg of Ohio, the Douglas, Arizona, Chamber of Commerce, and Mesa Verde National Park. Interesting feature articles on Tumacacori and Chiricahua National Monuments were noted in the December issue of the Arizona Highways Magazine. Deputy game wardenships were obtained from the State Fish and Game Commission and sent to field men in Arizona. Two-fold information leaflet copy was prepared for Walnut Canyon, Montezuma Castle, Tuzigoot, Bandelier, and Aztec Ruins.

413-EXTENSION SERVICES

Naturalist Dodge presented illustrated talks as follows:

To 65 people, Arizona Museum, Phoenix, January 8, on Organ Pipe Cactus National Monument.

To 38 people, Sacaton Scientific Society, Sacaton, Arizona, January 13, Arizona National Monuments.

To 38 people, Pioneer Hotel, Tucson, January 15, Southwestern National Monuments.

So many projection slides were loaned that the slide file was greatly depleted.

421-PROGRESS OF EXHIBIT PLANS AND PROJECTS

Efforts were made to obtain models of a pueblo family for installation in the Bandelier museum. Transfer of three museum cases to Tonto National Monument. Work continued on the Walnut Canyon exhibit plan.

422-LOANS, GIFTS, AND ACCESSIONS

From Western Museum Laboratories was received an adapter for the 5 x 7 view camera, and an electrically operated remote control shutter release for the same camera. Two six-drawer 5 x 8 card files were received.

430-STAFF RESEARCH AND OBSERVATION

A report was received from Charles H. Sisson of San Diego on an ancient beam from the Casa Grande. The material was sycamore and undatable. Identification was received on bird bones from Aztec and shell material from Tonto.

440-COOPERATIVE RESEARCH AND OBSERVATION

Beads of the Mooseberg collection from Casa Blanca were sent to Art Woodward for study. Arrangements were made with the Regional Geologist of Region III for studies to be carried on at the Chiricahua National Monument during February to obtain information necessary in

preparation of exhibit plans.

450-SWNM LOAN LIBRARY

A total of 61 publications were added to the Headquarters library as follows: 35 periodicals, 8 books, 13 pamphlets, and 5 reprints. Lack of time prevented the proper cataloging of these accessions.

460-SOUTHWESTERN MONUMENTS ASSOCIATION

The Association's annual report was completed.

470-PHOTOGRAPHY AND OTHER VISUAL AIDS

Administrative photographs were taken of flood damage at Casa Grande. Interpretive and record photographs were made of the results of the fall of Threatening Rock. Color-film frames exposed at Gran Quivira were forwarded to the Western Museum Laboratories for mounting as 2 x 2 inch projection slides, via the Washington Office.

520-NEWSWORTHY VISITORS

National Park Service visitors during the month were Drew Chick, David Jones, Hub Chase, George Grant, Charles Krueger, Al Kuehl, Joe Miller, McCole, and Seasonal Ranger-Naturalist Nesbitt of Rocky Mountain National Park.

STATUS OF ARCHEOLOGICAL PROJECTS

Recommendations for the expenditure of Antiquities funds for the remainder of 1941 were submitted. Letters regarding ruins stabilization were dispatched to the field. Supervision was maintained on the repair to pottery obtained in the stabilization of the Upper Ruin at Tonto. Paul Ezell repaired the following pieces: One red on buff jar, one plain ware bowl; one Gila red jar, one basket maker grey jar, three Gila bowls, one Gila polychrome bowl, one Gila polychrome jar, two black on white bowls, and two plain ware jars.

COMPLETED PROJECTS

Interpretive program outlines for Master Plans of seven monuments were finished. New informational leaflets for Natural Bridges and Hovenweep were worked up and processed. A monthly report index covering issues from 1926 through 1940 was finished and mimeographed as the supplement to the December 1940 Monthly Report. The article on the Casa Grande owls requested by the Region III Quarterly was finished and submitted.

PROJECTS FOR THE ENSUING MONTHS

Principal event of the coming month is the second annual Custodians' Meeting scheduled for February 19-21. Considerable time will be required in arranging the program and in preparing papers for this important event. Dodge will accompany Regional Geologist Maxwell to Chiricahua National Monument to obtain accurate material needed in the preparation of exhibit plans for the Massai Point orientation station. Several extension illustrated talks are scheduled. If time is

available, plans for exhibits to be installed in the two table cases at White Sands will be drawn up. Captioning and filing of loose prints for the negative file will be completed.

 SWNM

BRANCH OF MAINTENANCE

By F. E. Stonehocker, Gen'l Mech.,
Coolidge, Arizona

Several days were spent in cleanup and repair of sewage control equipment.

On USDI 1217 differential was taken down and checked over as well as brakes cleaned up and adjusted throughout.

USDI 1260 had considerable work done including body work, glass replaced, fender replaced, bearings taken up, brakes adjusted, and many other minor details.

Wiring completed in Superintendent's office.

USDI 1241 from Wupatki - factory reconditioned motor assembly installed, as well as the general once over for other items needing attention.

USDI 1237 from Bandelier was overhauled completely and painted for use on Soil and Moisture program.

One trip was made to Chiricahua to bring back USDI 1251 for an overhaul.

One trip to Phoenix to get sewage pump lengthened, and pick up an order of parts and supplies from Consolidated Motors.

 SWNM

BRANCH OF ACCOUNTING

By Parke W. Soule, chief clerk,
Coolidge, Arizona

Vouchers prepared during the month, regular appropriations	215
Vouchers prepared during the month, CCC	107
Purchase Orders issued, regular appropriation, Headquarters	80
Purchase Orders issued, CCC	100
Allotment ledger sheets prepared, regular appropriations	239
Allotment ledger sheets prepared, CCC	146

Expenditures:

	<u>Total for Month</u>	<u>To Date</u>
1411000 National Park Service 1941. . .	\$9,776.12	\$70,036.97
140/11000 National Park Service 1940-41	25.89	1,150.47
14x1010	928.83	3,707.38
Civilian Conservation Camps.	7,924.83	58,777.64
TOTALS	18,655.67	133,672.46

VISITOR STATISTICS AND INTERPRETATIONAL CONTACTS

Station	Personnel		Days		Lectures		Attendance		Unattended Stations		Contact	Total
	Per	Tem	No.	Att.	No.	Att.	Per.	Att.	No	Att.	Minutes	Contact
Arches	1		7	26	5	193					550	219
Capulin Mountain	1										0	0
Chiricahua	1		1	4	39	140					705	144
Natural Bridges	0	0									0	0
Organ Pipe Cactus	1		3	7			38				2260	45
Rainbow Bridge	0	0									0	0
Saguaro	1				1	55	158	526			3176	581
Sunset Crater	0	0								13		13
White Sands	3				111	576		475		153	2800	1204
Sub-Total	8	0	11	37	156	964	158	1039		166	9491	2206
Aztec Ruins	2		34	105	33	96					2530	201
Bandelier	2		5	18	5	18					490	36
Canyon de Chelly	1										0	0
Casa Grande	2	1	210	1717	166	1088				566	14643	2850
Chaco Canyon	1										0	0
El Morro	1										0	0
Gran Quivira	1		28	82	1	30					875	118
Gila Cliff Dwellings	0	0									0	0
Hovenweep	0	0									0	0
Montezuma Castle	2		70	233	54	206			75		14435	439
Navajo	1					2					240	2
Pipe Spring	1						5	32			330	32
Tonto	1		93	528	103	358					7285	726
Tumacacori	2		224	1058	248	1067					10625	2125
Tuzigoot	1		127	474	129	487					3797	961
Walnut Canyon	1				2	4	4	8			155	12
Wupatki	1		8	21						65	610	86
Yucca House	0	0									0	0
Sub-total	20	1	799	4036	741	3396	9	40		706	46015	7598
Grand Total	28	1	810	4073	897	4360	167	1079		872	55506	9794
Last year	27	6	990	4665	1005	4358				5084	58608	13221
Last Month	28	-	601	2776	563	3354	225	685		426	45012	6173

PERSONNEL NOTES

Joe Toulouse, custodian at Gran Quivira, completed his probationary service on January 7, and has taken his place as a permanent employee. Congratulations, Joe! You've made the best fraternity in the Service.

The following clipping will be of interest to those familiar with the fine work which Pablita Velarde has done for the Bandelier Museum. It was taken from The Gallup, New Mexico, Gazette of January 9, 1941.

"The Santa Clara artists, potters and painters, who come here annually to take part in the Inter-Tribal Indian Ceremonial indicated yesterday through Pablita Velarde, Indian artist, that they are planning to exhibit here in a booth the coming August when the Ceremonial is held here. Miss Velarde won some prizes here last year with her sketches. She called on the Editor yesterday while waiting here for the bus which took her back to her tribal pueblo of Santa Clara. Miss Velarde has been visiting her sister Mrs. Rosita Tsosie; who is married to Navajo Paul Tsosie at Teec Nos Pas, Arizona, west of Shiprock."

After a fine-tooth comb type of searching the country around Ajo, Bill Supernauth has finally purchased a horse for use in patrolling the inaccessible portions of his monument. It is reported that a large factor in his choice of animals was the large O. P. brand which this creature carried. Since Bill couldn't get his own initials on the horse, those of the monument seem very appropriate.

Monthly reports, from the casual reader's standpoint, are especially good this month, don't you think? Both Mac and Jack have their own personal types of whimsy that are especially refreshing. We wish Ed Alberts had more reports to write.

Congratulations are due Jimmie Brewer for breaking into Life Magazine with a panel of pictures showing a Navajo Indian taking a sweat bath. Johawill Faris might be expected to have bathing beauties at the Sands, but we didn't anticipate anything of that sort from Jimmie's part of the country.

Word from the Hennings, still in Silver City, New Mexico, report that Ruth is recovering slowly from her appendectomy. The Hennings have sold their trailer and are now living in a cabin camp. They expect to be ready to travel in a month or so and will visit a number of the monuments and parks on their way north.

Mr. Buchenberg (Buchy to us of the S.W.N.M.) took about 40 of our Kodachrome slides back East with him when he went home for Christmas all primed to give some illustrated talks on the Southwestern Monuments. Shortly after he reached home he wired us for "all the rest of the slides we could spare." We are anxiously awaiting Buchy's return because we think he is going to have some interesting tales of the reception accorded his talks.

Doc. Gipe has been busy around Headquarters building an additional room which will give much needed space for the Superintendent's office; and replacing the sewage disposal pump house which was destroyed by

flood waters early in January. It seems like old times with Doc. around, and he has a complete new supply of stories.

Pressure which has been bearing down on Al. Bicknell since Charlie Whatt left for de Chelly was relieved somewhat with the arrival of the new Casa Grande ranger, Freedom Chrisman. Chris brings with him from Boulder Dam his wife and baby daughter and commutes to the monument daily from his house in Coolidge, across the street from the Steen residence. Chris' chief addictions are a large pipe and a very musical mandolin.

Francis Elmore, former seasonal ranger at Bandelier, is filling the seasonal position at Casa Grande, occupied last year by Bob Lister.

Although this happened some time ago, its ramifications may still be influencing the lives of the principal parties. It seems that when Ed Alberts was relieving John Peavy at Tonto, he was cleaning up the desk one evening and threw the waste papers, envelopes, etc., into the fire. Some hours later he discerned that Peavy's check was among the items he had consigned to the flames.

Charlie Wyatt, Ruth, "Shandee" and Ann were at Headquarters for a short visit after a rough trip down from de Chelly. Charlie was en-route to Fort Huachuca at the request of the U. S. Army.

While Hugh was away at the Superintendents' Conference in Washington, the following story came out. Some time ago, Christine purchased a dozen lemons among which was one huge specimen. A morning or so later, in preparing grapefruit for breakfast, Chris got her hand in the wrong sack with the result that Hugh complained about the high acid content of his grapefruit. Chris, busy in the kitchen and not wanting to throw away the "grapefruit" insisted that Hugh eat every scrap. She did not realize what a task she had imposed upon him until a few moments later when she tasted her half of the lemon.

When Charlie Steen put in a day re-organizing the pottery storage arrangement for Casa Grande, he put a fistfull of matches in his pocket to assure sufficient relights for his pipe, but he didn't realize that he was creating a real hazard. He was working on the top step of the ladder with both hands full of pots when the matches ignited. Charlie's language was almost as sulphurous as the smoke that poured from his pocket.

Word from Flagstaff informs us that Quintin Bradley, last year's seasonal ranger at Canyon de Chelly, has enlisted in the Marine Corps.

With the distribution of 1941 license plates, Charlie Steen turned up with a 1540, reminiscent of Coronado's entrada; Dale missed the landing of the pilgrims by one year with 1621, while Hugh is (perhaps) celebrating the next Armistice, his car carrying number 1944.

*****SWM*****

The
SUPPLEMENT

to the

Southwestern National Monuments
Monthly Report



Wherein the reader will find Supplemental Observations, Random Papers, and Ruminations of the Boss, as well as any other odd, interesting, or instructive matter which may have turned up during the month

TO ALL PLANT LOVERS EVERYWHERE:

The mutilation and destruction of hundreds of Arizona's most beautiful plants, the sotols (*Dasyllirion Wheeleri*) continues unabated to secure the freakish "spoon flowers."

To obtain them the heart is cut out of the plant and the spoons stripped off, just as you would the leaves of an artichoke. Naturally, only the finest spoons are sold, leaving a lot of decaying debris to mar the beauty of the desert to the thousands of visitors who come annually to enjoy its charms. In ten minutes, a plant that has taken nature over a hundred years to create, has been destroyed.

If this wanton destruction of the native growth of the desert is not curbed by nature lovers of Arizona, the time is not far distant when the plant from which the so-called cactus spoons are obtained, will become extinct, because of selfish interests who commercialize them.

The decorative value of these spoons is very doubtful. They are not artistic, but are top-heavy and over-sized, just as the skinny man in the circus. They are placed upside down in a vase and usually combined with lilliput cat tails and called an arrangement.

The spoons are now being sold for as little as 1/3¢ when brought into Tucson and are being peddled from house to house for 25¢ a dozen. Strange to say, they bring fabulous prices in the east. They are not the bloom of the plant, but the very core; they are not beautiful; they are something different and that is why the gullible public purchases them.

If it were not for this unnecessary and thoughtless destruction of our native plants, our government would not find it necessary to spend millions of dollars to prevent soil erosion in many localities.

Every protest made to spoon flower vendors and every refusal to purchase or accept them as gifts, will, eventually result in the discontinuance of their being offered for sale; it will lend valuable assistance in the important work of conservation in Arizona and help to save hundreds of beautiful native desert plants which are now being completely destroyed as the result of this freakish fad.

A free package of sotol seeds may be obtained by sending six cents in stamps and an addressed envelope to Mrs. M. H. Starkweather, #2111 E. Adams St., Tucson, Arizona. It is hoped that when everyone realizes how difficult it is to propagate the sotol and how slowly it develops, more appreciation will be developed for these unusual plants that nature has bestowed on us.

CACTUS & SUCCULENT SOCIETY OF AMERICA

ARIZONA CACTUS & NATIVE FLORA SOCIETY

ARIZONA FEDERATION OF GARDEN CLUBS

Note: During the summer of 1939 Jimmie Brewer asked Jones Manheimer, a Navajo living in Nitzie Canyon near Inscription House, to write some Navajo stories for him. Here is the result of the request. The spelling and punctuation belong to Jones.

Stories by Jones Manheimer, Nitzie Canyon. 1939

Part 1

An Old Timer stories

Long time ago the old Navajo peoples finded toad horn. They saw that toad horns making an arrow point. This arrow point is for the Indian to singing with. The toad horn have just used his lips to finishes an arrow point and he have leaved the arrow point in the places where the Indians would pickers up. End

Part 2

Old hewed eater where been killed

Long time ago old hewed eater was been killed in the north east of Camors and these blood of hewed have come out in the field and that is become a rockese.

This rockes been gone about a miles and this killer get arrow point and rain down and put arrow in the egie of blood

Part 3

Cliff ruins

Stories of cliff willowin

Many year ago there was so many cliff willowinit about 5000 of the lives in these in one caved of the ruins.

After that many years the have been stare been by hunry and went to any caved ruins and asked food each other and some of them have garden but there hunry. And after a many year before that a big wind stomes have come and this was the end lived of the cliff peoples.

This is why the ruins of the cliff willowin houses have been destroying by wind stomes. A many year ago there was a cliff willowin in this Arizona. There was so many in every canyon and there used lived by planting and plant of seeded.

So after a many years the cliff willowin have begins so many in that time after about 100 year the big stomes of wind have come into the country.

End.

(Continued on next page)

Part 4

So in the time of the sun children and two boys of that two son begin to hunt. then these giants men eater and rest of the men eater too. The other emine was the bears and big herd of rain deers and that was all been killed and they ate up so many Indian in those days. They have tried of eater for about seven years. In those days the squaw dance find in that made.

End

Part 5 Stories of strip of lines on rockes

Long time ago there was lots water all over the wrould. That why they have striper of lines on the rockes and little caves on it. and in time than have water and big gaints of singing came along and have made the dances for the water to made the big canyon. After in those days the water have be gone the plants of trees and grass and panetrees have grown and we have came up on the new wrouldin those days. Now days we have striper of stream of water in our canyons.

the end

I'll sent you some more while you take this first. From Jones Manheimer. Writes me about again when you be finished. Se it is good stories and it is all right on it. Anerser soone.

*****SWNM*****

CONSTRUCTION OF INDIVIDUAL PLASTACELE OVERLAYS AS APPLIED TO SEEN MAP AREAS

(As developed by J. E. Buczuk)

A permanent and serviceable overlay of any seen area map may be constructed of 10/1000 inch plastacele cut to accommodate a map of any scale or size desired and brush shaded with varied colors of California Ink, said product being described in an article on map coloring in the March 1937 issue of the Journal of Forestry.

The use of this ink in positive shading of visible areas to obtain an overlay results in a map that is neat in appearance and sufficiently

opaque and uniform in texture to preclude any further experimentation relative to economy and speed of construction.

A completed seen area or visibility map is fixed in position with the determined radii of visibility depicted by corresponding colors, i.e., four, six, eight, etc., mile radius, indicated in color and a square, oversize sheet of plastacele superimposed thereon and fixed in position with transparent scotch tape. A pricker, or other point, is used to drill a small hole to indicate the hub or tower location. The procedure adopted by this Forest consists of initial seen area maps constructed on a $\frac{1}{8}$ inch to the mile scale base map of the Forest. This base map utilization permits simple tie-ins on the plastacele sheet by the simple expedient of scratching on the surface such points as are available on the base map as tie-ins. Forest, or other administration boundaries, if inclusive, as well as rivers or other natural termini, are indicated by a double line scribed proportionately; blue California Ink may be used in the event waters are boundaries.

The black areas of visibility, indicating that portion of ground surface visible at a radius of four miles from the tower, are then bounded with ink and the outline permitted to dry; this procedure discourages "crawling" when the shading is applied. Prior to dipping the brush, which should be one having a fine soft point, in the California Ink it is **necessary** to dip said brush in amyl acetate (Pear Oil)--a solvent of the ink; this dilutes and disperses the ink which is rather viscous. An excess of amyl acetate on the brush will result in rapid spreading, excessive dilution, and dispersion beyond control.

Using the small hole which is the tower location as a center, circles of four, six, eight, etc., mile radii are scratched on the plastacele sheet with the sharp point of a pair of dividers before the ink is applied. The remaining areas are then outlined with corresponding colored writing inks and brush shaded as described. After thoroughly dried the shaded surface may be entirely coated with a very thin coat of clear shellac to prevent scratching and to impart a gloss to the dried ink which will harden to a dull finish.

It will be found through practice that application with a daubing motion will produce the best result. This permits the placing of a generous thickness of ink coat to bring forth a smooth and opaque result when dry. It will also be found that the dried surface will not chip or peel--a factor which with other pigments was found to be very undesirable from the standpoint of utility.

Individual overlays of this type may be constructed for any given tract or area where a study is desired; they are oriented with respect to each other and so placed as to determine a system of lookout towers that will permit a minimum number of stations with a maximum of coverage and protection with consideration of such factors as are necessary.

Address of California Ink Company, Inc., is:

Camelia, Third and Fourth Streets,
West Berkeley, California.

FAUNA AND FLORA OF HOVENWEEP AND YUCCA HOUSE NATIONAL MONUMENTS

By Poland S. Richert

BIRDS

<u>Common Name</u>	<u>Scientific Name</u>	<u>Relative Frequency</u>
White-throated swift	<i>Aeronautes melanoleucus</i>	Abundant near canyon cliffs
Poor-will	<i>Phalaenoptilus nuttalli</i>	Common
Nighthawk	<i>Chordeiles</i>	Very common
Phoebe	<i>Sayornis</i>	Rare
Rock wren	<i>Salpinctes obsoletus</i>	Very common; a pleasant songster whose favorite places are Hovenweep's Towers.
Mourning dove	<i>Zenaidura</i>	Very abundant
Slate-colored junco	<i>Junco</i>	Very rare
Black-throated Sparrow	<i>Amphispiza bilineata</i>	Quite common
Sage sparrow	<i>Amphispiza nevadensis</i>	Abundant
Lazuli bunting	<i>Passerina amoena</i>	Very rare
Vireo	(unidentified)	Common
Yellow warbler	<i>Dendroica</i>	Rare
Mockingbird	<i>Mimus polyglottos</i>	Occasional
Sage thrasher	<i>Oreoscoptes montanus</i>	Common
Black-capped Chickadee	<i>Parus atricapillus</i>	Rare
Shrike	(unidentified)	Rare
White-crowned sparrow	(a western sub-species, unidentified)	Common
Western goldfinch	<i>Astragalinus psaltria</i>	Common
Oriole	(sub-species unidentified)	Occasional
Western meadowlark	<i>Sturnella neglecta</i>	Occasional
American magpie	<i>Pica pica hudsonia</i>	Occasional
Raven	(unidentified)	Common
Flycatcher	(unidentified)	Very common
Hummingbird	(unidentified)	Quite common
Woodpecker	(unidentified)	Quite common
Red-tailed hawk	<i>Buteo borealis</i>	Very common

<u>Common Name</u>	<u>Scientific Name</u>	<u>Relative Frequency</u>
Sparrow hawk	Falco sparverius	Very common
Turkey vulture	Cathartes aura septentrionalis	Common
"Hoot" owl	(unidentified)	Very common
Eagle	(unidentified)	Rare
Gambel Partridge	Lophortyx gambelii	Rare
Teal*	(unidentified)	Common
Duck*	(unidentified)	Common
Western sandpiper"	Ereunetes pusillus	Common
Killdeer*	Oxyechus vociferus	Common
Plover*	(unidentified)	Common
Belted kingfisher*	Ceryle alcyon	Occasional

Birds starred (*) were seen near, but not within present Monument boundaries. They frequented water holes such as Cajon Lake and other stock reservoirs, inasmuch as water and the shore, edges of ponds, is their chosen habitat. In each case, they are either a water or a game bird.

MAMMALS

<u>Common Name</u>	<u>Scientific Name</u>	<u>Relative Frequency</u>
Coyote	Canis latrans	Very numerous
Prairie dog	Cynomys	Very numerous
Cottontail rabbit		Very abundant
Jackrabbit	Lepus texianus (or melanotis)	Very abundant
Porcupine	Erethizon epixanthus	Occasional
Gray squirrel	Sciurus	Quite numerous
Striped squirrel (chipmunk)	(unidentified)	Numerous
Antelope squirrel (chipmunk)	(unidentified)	Numerous
Wildcat	Lynx sp.(?)	Occasional
Pack rat	(unidentified)	Occasional
Mouse	(unidentified)	Quite abundant
Deer	Odocoileus sp.(?)	Seen at Hovenweep during winter only.
Bat	(unidentified; it is believed there are two species present)	Very abundant
Badger	Meles sp.(?)	Rare
Skunk	Mephitis	Occasional

REPTILES

<u>Common Name</u>	<u>Scientific Name</u>	<u>Relative Frequency</u>
Rattlesnake	<i>Crotalus adamanteus</i>	Occasional
Lizard	4 or 5 different species, all unidentified	Very numerous

During the two seasons at Hovenweep, only one rattlesnake was encountered by this observer. At no time were any of the harmless species seen, although some are undoubtedly present. Apparently snakes, together with many of the mammals listed have been wantonly killed by unthinking persons, so that they have all suffered a diminution of numbers. Discussions with some of the early cattlemen of the region reveal that the Hovenweep area at one time supported an abundant bird and game population. It is an undisputed fact that many of our animals are becoming more scarce each year, while a few are, even now, on the verge of extinction. The greatest enemy of wildlife is Man. The Sage Grouse (*Centrocercus urophasianus*) was formerly found in abundance on the sagebrush-covered Cajon Mesa, but owing to immense numbers shot for sale in the market, they have become exterminated in this region. Wildlife protection is one of the urgent problems at Hovenweep.

GRASSES

<u>Common Name</u>	<u>Scientific Name</u>
Rice grass	<i>Oryzopsis</i>
Curly grass.	<i>Hilaria jamesii</i>
Neotoma grass.	<i>Aristida fendleriana</i>
Gramma grass	<i>Bouteloua gracilis</i>
Needle and thread grass.	<i>Stipa creptandus</i>
Annual fescue.	<i>Fescue octoflora</i>
June grass (cheat)	<i>Bromus tectorum</i>

FORBS (weeds)

Russian thistle.	<i>Salsola pestifer</i>
Pentstemon	<i>Pentstemon</i>
Lamb's quarters.	<i>Chenopodium</i>
Sunflower.	<i>Helianthus annuus</i>
Indian buckwheat	<i>Eriogonum inflatum</i>
Horehound.	<i>Marrubium vulbare</i>
Pussy toes	<i>Antennaria</i>

BROWSE (trees and shrubs)

<u>Common Name</u>	<u>Scientific Name</u>
Cedar or juniper	<i>Juniper utahensis</i>
Scrub oak	<i>Quercus gambelii</i>
Service berry	<i>Amelanchier</i>
Choke cherry	<i>Prun s melanocarpa</i>
Four-lobed salt bush	<i>Atriplex canescens</i>
Sage brush	<i>Artemisia tridentata</i>
Mormon tea	<i>Ephedra viridis</i>
Match weed	<i>Gutierrezia sarothrae</i>
Shadescale	<i>Atriplex confertifolia</i>
Salt bush	<i>Atriplex nattali</i>
Rabbit brush	<i>Chrysothamnus nauseosus</i>
Black brush	<i>Coleogyne ramosissima</i>
Cliff rose	<i>Cowania stansburiana</i>
Purple aster	<i>Erigeron</i>
Squaw berry	<i>Rhus trilebata</i>
Wild currant	<i>Ribes aureum</i>
Mountain ash (frizzle leaf dwarf ash)	<i>Fraxinus anomala</i>
Hackberry	<i>Celtis</i>
Cottonwood	<i>Populus balsamifera</i>
Willow	<i>Salix</i>

The above is a representative list of flora occurring at Hovenweep Ruins National Monument. The Holly-Hackberry Ruin Groups are in a 4,000 - 5,000 ft. vegetation zone (altitude above sea level); whereas the Cajon Group and the Square Tower Canyon Group are slightly lower, at 3,000 - 4,000 ft. It follows that the vegetation varies perceptibly between the various Ruin Groups. Thus, the Holly-Hackberry Ruin Canyon Groups, being in a slightly higher vegetation zone than either the Square Tower Canyon or Cajon Groups, have a greater percentage of the browse type of plant, whereas at Square Tower and Cajon, grasses and weeds predominate. Regardless of altitude, and wherever a constant water supply is present, as for example at the heads of spring-fed, box canyons, the cottonwood, hackberry and willow are to be found. These deciduous trees are always excellent indicators of a perennial water source, because they cannot exist in a semi-arid climate unless they receive moisture continually or at frequent intervals.

In a brief discussion of the flora of Hovenweep, an important factor is that of overgrazing, which has brought about far-reaching changes in vegetative types of the Monument over a comparatively short period of 25 - 50 years. Because of extreme overgrazing by imprudent sheep interests, dense stands of the so-called "indicator plants" have been introduced in great quantities in many areas of the Monument. An indicator plant is one with very low forage value, and one which assumes a strong foothold in a region where overgrazing or drouth, or a

combination of both, has choked and killed the fine palatable grasses which formerly grew in that area. Examples of such indicator plants are: the Russian thistle, match weed and pentstemon. In many erstwhile grassy patches, these indicators have grown and reproduced an extremely high density, where 50 years ago the region had a beautiful cover crop of fine palatable grasses and succulent browse. Today, large grass areas within the Monument are a rare sight. According to range authorities, indicator plants have a palatability value for cattle approaching zero. Even goats and sheep, which eat almost anything, rarely nibble at these plants. Midwestern dust bowl areas are now covered with this characteristic indicator plant, particularly the Russian thistle.

Sage (*Artimesia tridentata*) is a relative newcomer to the region, and today it is the chief browse plant for the thousands of domestic sheep which are grazed each winter on Cañon Mesa. Incidentally, it is also very palatable for deer which leave the high, snow-covered mountain slopes during the winter to range the mesas and protected canyon floors. Considerable sage, especially at the heads of the Monument's Ruin Canyons has been killed due to overgrazing.

A few years' rest, with subsequent restricted grazing would perform wonders for the Cañon range, assuming that normal precipitation occurred in the meantime. It goes without saying that grazing must either be completely abandoned on Monument premises, or strictly controlled.

* Grateful acknowledgment is hereby made to Mr. J. E. Palmer, Range Examiner for the U.S. Grazing Service, Salt Lake City, Utah, who kindly assisted the writer in the identification of many of the plants on the Monument

*****SWIII*****

FLORA AND FAUNA OF YUCCA HOUSE NATIONAL MONUMENT, COLORADO

Flora

The ten acres comprising Yucca House National Monument are naturally very rocky because of the pueblo ruin house mounds which the area features. Therefore the principal types of vegetation to be found here are shrubs, herbs and weeds. Trees and grasses are absent. As a matter of fact, the ruins and house mounds are overgrown chiefly with three types of shrubs: sage brush, salt bush and rabbit brush. Other vegetation is listed as follows: (consult Hovenweep list for scientific names of the plants mentioned; those not mentioned in the previous list will be given with their scientific names in parentheses) Russian thistle, Pentstemon, Sunflower, Indian buckwheat, Prickly pear cactus (*Opuntia engelmannii*), Mormon tea, and Match weed.

Fauna

Prairie dog, rattlesnake and rabbit are the chief animals found precisely within Monument Boundaries. Field mice are seen occasionally. Three species of lizards are very common. The ruins area at Yucca House is obviously neither large enough nor adapted to the support of any great amount of wildlife. However the surrounding region, as for example Ute Mountain immediately to the west of Yucca House, has considerable wildlife.

Birds most commonly seen at Yucca House or the immediate vicinity are as follows: Orchard oriole, Yellow warbler, English sparrow, Sparrow hawk, Magpie, Western bluebird, Red-tailed hawk, Turkey vulture, Killdeer, Night hawk, Phoebe, Mourning dove, Gambel partridge, Goldfinch, Mockingbird, Raven, Blackbird, Barn swallow, Flicker, Western kingbird, Hummingbird, Chickadee, Rock wren, Vireo, Shrike, Cowbird, Flycatcher and Western meadowlark.

*****SWNM*****

A SUGGESTED BIRD OBSERVATION FORM

By Earl Jackson

If you are an amateur bird observer like myself, do you ever have this trouble? You are out in the field and you see a new bird with which you are not familiar. You quickly drag out a notebook, and between fleeting glimpses at the elusive bird you attempt to draw a sketch of the critter and indicate on the sketch where different colors belong. If you are no faster as an artist than I, you have a difficult time getting all the dope you want before the bird has flown.

So, on the next page, you see a mimeographed sheet containing four pictures of birds, each with spaces under it for written data. One is the outline of a soaring bird, one of a perched bird of prey, one a swimming water bird, and the other just an average bird. There are the four commonest forms and poses of our feathered population. Cutting the mimeographed page into four sections, you can staple a lot of them together to make a notebook you can carry in your pocket.

Then, when you see a strange bird, the use of the outline pictures is obvious. Usually you will pencil minor changes, if any, on the outline. You will save the time of drawing a sketch, and will simply need to indicate by hatching or any sort of shading where the different colors are seen on the bird, with a single word on the side to indicate what the

color is.

The words for the written data below the pictures are self-explanatory. I borrowed the wording almost exactly from forms Eddie McKee uses at Grand Canyon.

With such observations, you can file them conveniently, and at leisure look up the bird and enter it in the observation file.

*****SWIM*****



WILDLIFE OBSERVATIONS

Name of Bird: _____

Date: _____ Time: _____

Place: _____

Notes on behavior, food, conditions,
etc:

Observer: _____



WILDLIFE OBSERVATIONS

Name of Bird: _____

Date: _____ Time: _____

Place: _____

Notes on behavior, food, conditions,
etc:

Observer: _____



WILDLIFE OBSERVATIONS

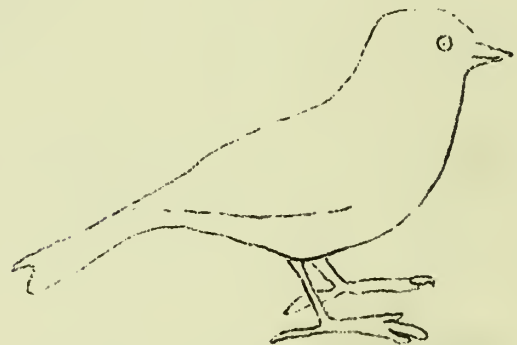
Name of Bird: _____

Date: _____ Time: _____

Place: _____

Notes on behavior, food, conditions,
etc:

Observer: _____



WILDLIFE OBSERVATIONS

Name of Bird: _____

Date: _____ Time: _____

Place: _____

Notes on behavior, food, conditions,
etc:

Observer: _____

SOUTHWESTERN MONUMENTS

MONTHLY REPORT



FEBRUARY 1941

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

THE SOUTHWESTERN NATIONAL MONUMENTS FEBRUARY, 1941, REPORT INDEX

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HEADQUARTERS

SOUTHWESTERN NATIONAL MONUMENTS
NATIONAL PARK SERVICE

COOLIDGE, ARIZONA

0-0-0-0-0

HUGH M. MILLER, SUPERINTENDENT

<u>FIELD STATION</u>	<u>POST OFFICE</u>	<u>CUSTODIANS</u>	<u>1940 VISITORS</u>	<u>ACRES IN AREA</u>
1. ARCHES	Moab, Utah	Henry G. Schmidt	2,518	33,680.00
2. AZTEC RUINS	Aztec, New Mex.	Thomas C. Miller	10,550	25.88
3. BANDELIER	Santa Fe, N.M.	Chester A. Thomas	13,689	26,026.20
4. CANYON DE CHELLY	Chin Lee, Ariz	Charles D. Wyatt	2,733	83,840.00
5. CAPULIN MOUNTAIN	Capulin, N.M.	Homer J. Farr	35,100	680.42
6. CASA GRANDE	Coolidge, Ariz.	Albert T. Bicknell	12,877	472.50
7. CHACO CANYON	Chaco Canyon, NM	Lewis T. McKinney	2,245	21,509.40
8. CHIRICAHUA	Dos Cabezos, Ariz	Frank L. Fish	10,120	10,694.80
9. EL MORRO	Ramah, N. Mex.	Robert R. Budlong	1,593	240.00
10. GILA CLIFF DWEL	New Mexico	No Custodian	80	160.00
11. GRAN QUIVIRA	Gran Quivira, NM	Joe H. Toulouse	2,494	610.94
12. HOVELIWEEP	Cortez, Colo.	No Custodian	352	285.80
13. MONTEZUMA CASTLE	Camp Verde, Ariz	Earl Jackson	8,078	521.41
14. NATURAL BRIDGES	Blanding, Utah	Zeke Johnson	901	2,740.00
15. NAVAJO	Tonalea, Ariz.	James W. Brewer	513	360.00
16. ORGAN PIPE CAC.	Ajo, Arizona	William Supernaugh	9,775	330,687.00
17. PIPE SPRING	Moccasin, Ariz.	Leonard Heaton, Act.	1,141	40.00
18. RAINBOW BRIDGE	Tonalea, Ariz.	No Custodian	215	160.00
19. SAGUARO	Tucson, Ariz.	Don W. Egermayer	16,892	63,284.00
20. SUNSET CRATER	Flagstaff, Ariz.	D. Jones, in chg.	11,888	3,040.00
21. TONTO	Roosevelt, Ariz	John Peavy	5,240	1,120.00
22. TUMACACORI	Nogales, Ariz.	Louis Claywood	7,287	10.00
23. TUZIGOOT	Clarkdale, Ariz	Jack Cotter	6,125	42.61
24. WALNUT CANYON	Flagstaff, Ariz	Paul Beaubien	12,258	1,873.10
25. WHITE SANDS	Alamogordo, N.M.	Johnwill Paris	54,498	143,227.47
26. WUPATKI	Flagstaff, Ariz	David J. Jones	3,326	35,865.30
27. YUCCA HOUSE	Cortez, Colo.	No Custodian	136	10.00
TOTALS			232,624	761,206.89

AREA, END TRAVEL YEAR 1940: 1,189.395 Sq. Miles

OPENING

By Hugh M. Miller, Superintendent

The Superintendent made two trips to Phoenix during the month in connection with the acquisition of rights of way for the Organ Pipe road. A solution of the problem, acceptable to all parties may have been found. The only other official travel by the Superintendent was to Regional Headquarters in Santa Fe with Mr. Tolson. We were present enroute at a conference of members of the Coronado International Memorial Commission, in Bisbee. One day in Santa Fe was taken up in conference relating to the organization of the Soil and Moisture program; the second day with regional technical personnel on planning problems. Total absence from Headquarters - 5 days.

The outstanding event of the month was the Custodians' Meeting at Headquarters on the 19, 20 and 21. Mr. Tolson, Chief of Operations, was present for the Washington Office, and contributed greatly to the success of the meeting. Hillory not only knew a lot of the answers, but he was so darn' genial about it, that he would probably have rated first in a popularity contest, had there been one, ladies' votes included. There was general regret that the Regional Director's absence in the east prevented him from attending the meeting. Notice is served right now that no excuses from Tilly will be accepted next year.

A special report on the meeting will be submitted as soon as time and the limitations of a short-handed office will permit. Briefly, the meeting was genuinely successful. Twenty-one custodians were present. Only Budlong of El Morro was absent; because of impassable roads. The program was crowded, partly by carry-over subjects from last year and partly because of the attempt to include all subjects of general interest on which field men had requested discussion. The scope of general problems has been outlined now, and the attempt next year will be to select fewer subjects, with an eye to relative importance, and to provide for exhaustive treatment.

Nearly all subjects were treated this year as round-table discussions, but even so the time allotted was too short in many cases. The meeting is the same in purpose as the usual pre-season gatherings of park personnel for instruction, planning, and organization, and deals concretely with specific problems within the bracket of existing regulation and policy. As previously stated, the plan is to get down to brass tacks in the details of monument administration; yet a corollary and very great value lies in the increased comprehension of Service policies, and the strengthened loyalty to the Service which clearly emerge in a review of any session.

CCC programs have been handicapped again by bad weather.

The Tucson Daily Star's Rodeo Edition, published during the month, gave the monuments and the Service some good breaks. It's nice to have a strong Arizona newspaper do right by our Nell - though the Star is by no means alone in that virtue.

Preliminary estimates, described by one loyal Service employee as the substance of things hoped for, have received initial consideration;

will be present in March.

In spite of adverse weather conditions, which have blocked completely the approach roads to some of the northern monuments, travel to the Southwestern National Monuments gained approximately 700 over the total for February, 1940. Desert resorts and hotels are so crowded with visitors that we should have had more travel except for the bad weather. A representative of a large agency which char- ters cars for sight seeing trips remarked just two days ago that al- though he had never seen so many winter visitors in Phoenix the peo- ple simply would not leave town on cloudy or rainy days.

*****SWM*****

CONDENSED REPORT

IN WHICH HIGHLIGHTS OF THE MONTH ARE GIVEN

Coolidge, Arizona

April 1, 1941

MAR

The Director
National Park Service
Washington, D. C.

Dear Mr. Director:

The Condensed Report for the month of March, 1941, follows:

TRAVEL

Station	1941		1940	
	February	Travel Year	February	Travel Year
Arches	44	704	70	720
Capulin	100*	5650*	300*	6700*
Chiricahua	650	2636	460	2106
Natural Bridges	---	----	0	92
Organ Pipe Cactus	1025*	4480*	1325*	4735*
Rainbow Bridge	--	--	0*	20*
Saguaro	2137	6913	3408	8391
Sunset Crater	141*	1392*	92*	1400*
White Sands	2946	14216	1571	9103
TOTAL, Geol. & Biol.	7043	35991	7226	33267
Aztec Ruins	162	1639	87	1707
Bandelier	41	1200	171	1492
Canyon de Chelly	--	357	31	519
Casa Grande	2889	8427	1702	5815
Chaco Canyon	8	185	11	544
El Morro	-	171	0	274
Gila Cliff Dwellings	--	10*	0*	10*
Gran Quivira	130	637	54	704
Hovenweep	--	43*	0*	10*
Montezuma Castle	318	1902	333	1825
Navajo	-	42	9	75
Pipe Spring	27	337	10	141
Tonto	1040	2516	628	2483
Tumacacori	1391	3798	1200	3694
Tuzigoot	492	2631	357	1721
Walnut Canyon	101	1627	334	2027
Wupatki	165	781	102	752
Yucca House	-	27*	0*	20*
TOTAL, Hist. Sites	6764	26330	5029	23813
Total for Feb.	13807	62321	12255	57080
Last Month	11554	48483		

*Travel estimated.

100 ADMINISTRATIVE

110 Superintendents Special Activities

The Superintendent made two trips to Phoenix and one to Santa Fe, the latter in company with Chief of Operations Tolson. A large portion of the month was taken up with the Custodians Meeting on February 19, 20, and 21. (page 63)

120 Monument Inspections

Arches - Horace Miller. (page 73)

Aztec Ruins - Lewis McViney. (page 78)

Bandelier - Lyle Bennett, John Yell. (page 77)

Chaco Canyon - Dale King, Erik Peed, Jim Hamilton. (page 94)

Chiricahua - V. W. Saari, Lake S. Bill, Ross Maxwell, Johnwill

Paris, Ray Ringenbach. (page 76)

Montezuma Castle - Art Thomas. (page 89)

Organ Pipe Cactus - Ross Maxwell, W. B. MacDougal, D. W. Eggermayer, T. C. Miller, Joe Golden. (page 72)

Saguaro - V. W. Saari, L. S. Gill, Matt Dodge. (page 83)

Tonto - Joe Golden, Ray Ringenbach. (page 70)

Tumacacori - M. J. McCollm, Louis Schellbach, Johnwill Paris. (p. 88)

Tuzigoot - Leonard Heaton. (page 91)

Walnut Canyon - Erik Peed, Art Thomas. (page 80)

Wupatki - Albrecht, Erik Reed, Edd Preece, Jack Diehl, Balch. (p. 93)

130 Investigations of New Areas

The Superintendent and Hilory Tolson attended a meeting of the Coronado International Memorial Commission at Bisbee. (page 63)

160 General Publicity

The Arizona Star (Tucson) Rodeo Edition gave the Arizona monuments much favorable publicity. (page 63)

White Sands - Alamogordo Chamber of Commerce and American Airlines are cooperating in publicity for the annual Play Day. (page 74)

200 MAINTENANCE, NEW CONSTRUCTION, IMPROVEMENTS

210 Unusual Construction.

Casa Grande - Emergency construction and repairs to sewage disposal plant complete except for grading and landscaping. Work on Superintendent's office 98% complete. (page 85)

Chiricahua - One cubic yard of rock removed from road, 7½ miles of road graded. (page 76)

Saguaro - Four days on road maintenance due to heavy rains. (p. 83)

230 Special Improvement Activities

Arches CCC - Footings on stone masonry headwalls for multiple arch culvert completed, most of rough work on headquarters entrance road completed, excavations for custodian's residence completed. (p. 73)

Bandelier CCC - Work progressed rapidly on Residence #4, 1000 lineal feet of stone gutter laid, addition to Residence #2 complete to viga height, pit toilet for checking station complete. (page 77)

Chaco Canyon CCC - Truck trail to proposed headquarters area started, work done on following projects, Guide and Contact, General cleanup, Boundary fence, Road maintenance, maps and models, rock Quarry, entrance road "C", signs and headquarters road. (page 95)

Mount Elden CCC, Walnut Canyon - All work was on the roads.

Sunset Crater - Road maintenance.

Wupatki - Custodian's residence completed, excavation for administration building 90% complete, work continued in rock quarry. (p. 80)

300 ACTIVITIES OF OTHER AGENCIES IN THE MONUMENTS

350 Donations and Accessions

Chiricahua - Joyce and Joseph Muench donated two 10" x 12" enlargements. (page 75)

Gran Quivira - Two 2 inch tinted slides, several volumes, a number of 8 x 10 prints from the state photographer. (page 81)

Montezuma Castle - Glass shelves for museum cases from Bandelier and fluorescent lamps and fixtures for one case. (page 90)

Tumacacori - A large copper kettle received from the Arizona State Museum. (page 88)

400 INTERPRETATION

410 Lecture and guide service

10797 educational contacts were made during the month. This figure is incomplete as figures from one monument were not received.

420 Museum Activities

Aztec Ruins - Slight changes made in two cases; textile specimens sent to Denver Art Museum for study. (page 79)

Bandelier - Pablita Velarde has completed paintings for Case 17 and is now working on Case 16. (page 76)

Tuzigoot - All labels are to be revised, a new pottery chart prepared and plans for a diorama submitted. (page 91)

Walnut Canyon - Artifacts recovered in 1938 have been cleaned and catalogued.

430 Research and Observations

431 Botany - Much plant collecting is being done because of the exceptional growth this spring.

Saguaro and Organ Pipe - Drs. Brown and Lyttle of the University of Arizona are continuing their studies of the bacterial necrosis of saguaros. This disease is also attacking organ pipe and senita cacti. (page 71 and 83)

434 Archeology

Wupatki - Plans for excavation and stabilization of Wupatki ruin progressed. (page 92)

500 USE OF MONUMENT FACILITIES BY THE PUBLIC

510 - In spite of bad weather conditions travel to the southw st

Monuments increased nearly 1,700 over that for February 1940. (p. 64)

600 PROTECTION

650 Ruins Stabilization.

Chaco Canyon - Bad weather forced all jobs to be of a minor nature. These were principally support jobs on Pueblo Bonito. (p. 95)

Montezuma Castle - The custodian and ranger completed all necessary stabilization for the coming travel season. (page 89)

Tuzigoot - Stabilization complete on first five units of the ruin. Only Unit VI remains to be done. (page 91)

*****SWNM*****

FIELD REPORTS

FROM THE MEN ON THE JOB

CAPULIN MOUNTAIN

By Homer J. Farr, Custodian
Capulin, New Mexico

Visitors this month, 100; travel year to date, 5650.

Travel has been just about nil for this month as of date the final top or end of the road is completely closed to travel but observations made yesterday revealed the possibility of getting the road open this week. As I reported last month cars were permitted to go to within about one-fourth mile from the top of the Volcano. There a wide place has been chosen for the placing of a stop sign. We have had about one hundred visitors this month but only a few were able to walk to the top and get the real benefit of the views.

Weather has been some better this month than last. While we have had several light snows, we have had no zero spells this month, and in general it has been working weather for the hardy all month.

The heart of the month was well spent at the Custodians' Meeting at Coolidge by this custodian. And most certainly we all gained by it a great deal. Personally I would have gotten very tired from the long trip there and back had it not been for the "spice of life" that Zeke kept continually pouring over the Turkey.

Routine and Continuing Projects: The road has exacted considerable attention this month, opening culverts, clearing rock, and shaping drainage has kept us busy (Us, I mean 1231 and I); slight repair on the boundary fence this month has been finished also.

Routine and Continuing Projects for the Ensuing Month: Opening of the road will be the first thing in order and the painting of the various signs will come second.

Wildlife: Only about five or six of our deer are gentle enough this winter to get close to the road; These I see about once a week. Thousands of the Mountain Blue Birds and Robins have been with us all winter.

Not For Record: Several complaints recently requesting that White Sands be poured back into the hole in Capulin Mountain. I, too, believe that's where they came from.

TONTO

By John Peavy, Custodian
Roosevelt, Arizona

Visitors this month, 1040; travel year to date, 2516.

Opening: Although a flood at Tonto is almost a topographic impossibility, many present out of state visitors suggest that the Cliff Dwellings were not constructed as protection against some mortal enemy, but as protection against meteorological adversity to human occupation of any site here other than one protected by an overhanging cliff.

In other words, it's still raining and getting to be more miserable every day. If this keeps up I am going to have to add a machete to my regular items of equipment carried in the pickup. Although ecologically unsound, at least for a few years, some local gentry insist that the Lower Sonoran type will soon change to a Panamanian jungle.

Travel: Travel has increased 65% over the same month last year. We have had a total of 1040 visitors this month. 121 parties including 499 individuals visited the Lower Ruin and 5 parties including 15 people made the trip to the Upper Ruin. 601 visited the Museum. 114 visitors arrived during my absence at the Custodian's Conference. These visitors received partial guide service from the caretaker.

On heavier travel days I have been able to contact only about 60% of the visitors due to the fact that Ruins and parking lot are one-half mile apart.

NPS Visitors: Joe and Helen Golden visited both Lower and Upper Ruins on the ninth. Rick Ringenbach and Ernest Snyder also from headquarters made it to the parking lot on the 16th.

Roads and Trails: Roads and trails are gradually descending into the dangerous but passable category. The weather and high amount of travel has not permitted any road and trail maintenance this month.

Improvements and Repairs:

1. Entrance sign stained.
2. Other directional and warning signs painted and repaired.
3. Directional sign placed at Roosevelt Dam.

Closing: While rumors sound very favorable for the construction of a house at Tonto at some unpredictable future date, we are going to have to purchase a new tent in the very near future if the weather doesn't change. At present there isn't a completely dry article in the "Custodian's Residence."

ORGAN PIPE CACTUS

By William R. Supernaugh, Custodian
Ajo, Arizona

Visitors this month, 1025; travel year to date, 4480.

General: The best news this month was the word that the long hoped for water development money had come through, so that another well is now being drilled at the new location. I guess I should say another hole for the last was just that and not a well but it is hoped for better results this time. A driller and helper were hired and work begun on this project on the eleventh and we are now to a depth of 125 feet. Two days were lost from drilling by a boulder caving in on the bit which took two days to get out of the hole. Other than this delay work is progressing smoothly.

One official trip to Coolidge was made during the month in connection with the well work and three days were spent with Doctor Maxwell marking out new well locations, just in case.

Five days were spent by Doctor McDougal on the monument inspecting areas that had not been covered before. We managed to cover one area in the Ajo mountains that had not been inspected before and found the best stand of Organ Pipe Cactus yet encountered.

The most important event of the month from the administration standpoint was the annual meeting at Headquarters, for these certainly are a big help to custodians to clear up mutual problems and understand where we are heading.

Further studies were made this month on the cactus disease and a small portion of the area covered with the custodian by Doctors Brown and Streets and Paul Lightle of the University of Arizona and Custodian Eggermayer of Saguaro National Monument. The disease has made rapid advances in the last two months and was found to be definitely in saguaro, organ pipe and senita cacti.

Two cows belonging to the grazing permittee on the monument were killed by a car on the main road. As the driver of the car was willing to pay Mr. Gray for the cows we got this settled without any complications involving the Park Service.

Wildlife: Having received scoldings in my youth for tramping on flower beds nearly all patrols are now made with a guilty conscience as all side roads are overgrown with wild flowers and it is like driving through the flower beds to find the road. Due to the continuous rains there is a great display for this time of year.

Everything seems to point to an early spring as most all smaller animals are out of hibernation and one rattlesnake was found by a monument visitor.

Probably due to the great number of flowers out this year, hummingbirds are plentiful and are furnishing much interest for our visitors.

Visitors: This has been one of my best months for prominent visitors, which included Doctors Maxwell and McDougal of the Regional Office, Mr. Chandless and family from the Denver Regional Office of the Forest Service, and the University group mentioned before brought over by Don Egernayer.

I was also honored to have Custodian and Mrs. Miller take time off to see the Monument and to have our good office force represented by Joe and Helen Golden. The worst part was that Joe was on his own time and I couldn't work him as much as I would have liked to.

~~SWNM~~

ARCHES

By Henry G. Schmidt, Custodian
Moab, Utah

Visitors this month, 44; travel year to date, 704.

Weather: Every time I brag a bit about the climate or the fine weather we usually enjoy in this section of the country, we get a good dose of the kind of murk we don't care to advertise. The past month was dull and very damp, with 90% fog, 5% rain, 4% snow and 1% sunshine. The only unpleasant elements lacking were high winds and dust storms. The weather man blames our plight on a pocket of stagnant air that is present in this region but predicts that the recent warm spell will precipitate this air pocket and bring us our usual weather next month. He may be correct because part of the precipitation is taking place right now.

Roads: We still have a series of ruts, several feet wide and inches deep, 10 miles long, leading into the Windows section. The last two miles don't count because they are covered with snow to a depth of nine inches and impassable without chains. It has been necessary to close this road to all travel for the last twelve days. There is no use heaping coals of fire on the Service and that is just what would happen if we allowed visitors to attempt to navigate our mud holes and snow banks. If we are favored with a week of sunshine and no precipitation of any kind, it will be possible to work the road into fair shape in a short time. The State Highway Department has promised to blade the first (and muddiest) five miles as soon as conditions permit. The CCC maintenance crew will take care of the last five miles.

The road down Salt Valley is impassable and will remain so until we have had a long dry spell to evaporate all moisture that is now held in the adobe clay flats.

Visitors: The Courthouse Towers section of the monument resounded to the "oh's and ah's" of more visitors this month than did the Windows section. The few hardy visitors that did brave the rigors of our fog and sleet were much dismayed to find they could not enter the Windows section, but were appeased after hiking through the Courthouse

Towers. A total of 30 visitors made the hike through the Towers and only 14 successfully navigated the road to the Windows section. This is a record for Courthouse Towers.

Park Service visitors include Horace Miller, Fruita, Colorado; Mr. and Mrs. Glenn Boyland, Mr. and Mrs. Art Gilmore, and Tom Williams, of Mesa Verde National Park.

Project Progress for the Month: Weather conditions made maintenance of the Windows section road impracticable and any attempt to work under the prevailing conditions would have been a waste of time and money.

The testing of the headquarters well was completed and report made to the Superintendent. This work was carried on through the cooperation of the Grazing Service and it is probable that they will complete the cleaning out of the well within the next two months. They have agreed to do this work for us and, also, offered to rig our well with the necessary tubing if we can have it on the job at the time they clean out the well.

Routine patrols were made through the Windows section and the Courthouse Towers. No patrols were made in the other three sections.

The custodian cooperated with the Associate Regional Engineer and the survey party in making the preliminary road reconnaissance between Courthouse Wash and the Balanced Rock.

Projects for the Ensuing Month: Maintenance of the Windows section road, with particular attention to correcting drainage faults near the Courthouse Wash crossing.

Assistance to the survey party now working on the preliminary survey to the Windows section.

Custodian Conference: The custodian, HCWP and small daughter, were very happy to be able to attend the Custodians' Meeting at Headquarters on February 19, 20, and 21.

The meeting was packed with interesting discussion from start to finish, and the exchange of ideas of all personnel present will, I believe, prove of great value to all of us.

SWNM

ARCHES CCC

By Walter W. Welton, Proj. Supt.
Moab, Utah

Because of the large number of replacements of enrollees last month organizing new crews on the various jobs has been slow. The footings on the stone masonry headwalls for the multiplate arch culvert are completed and stone is being cut for the arch proper.

Most of the rough work is completed on the headquarters area entrance road and the back road to the residential area.

The excavation is completed for the footings and basement of the custodian's residence. Some of the stone has been cut and hauled to

the site for this building.

Because our Cat and Dozer has been broken down the past month work has progressed slowly on Job 13, Entrance Road Section 1-A. However, considerable work has been done by hand and with wheelbarrows.

An adequate supply of sand and gravel has been hauled and stock piled in camp to take care of all concrete and masonry work that will be done before midsummer when we can again get materials from the Colorado River. Crews have also been working all month getting out rock for the culvert and buildings.

No work has been done on the channel change and bank protection in the headquarters area. No work has been done on maintenance of the existing road this month as this road has been impassable most of the time.

SWNM

WHITE SANDS

By Johnwill Faris, Custodian
Alamogordo, New Mexico

Visitors this month, 2946; travel year to date, 14,216.

After reading the "Once in a Lifetime Southwestern Monuments Retort," I feel that some one in your office could write nearly all the reports and very few would ever know the difference. Any way Hugh, congratulations on a fine meeting, from the opening address to the Home Waltz. Much good resulted I know and never have I seen a more congenial group. I am proud to be one of them.

Travel has held up very well. The road was closed for four days and our visitor total amounted to two thousand nine hundred forty-six, (2946) people in seven hundred fifty three (753) cars.

Only one outside meeting was attended and that the Chamber of Commerce in Alamogordo at which Hollis Thompson of the American Airlines was guest speaker. Also present were representatives of many surrounding towns. Many of those present visited our area after the meeting and Mr. Thompson was very high in his praise for the unit. He has expressed a desire to attend our Play Day April 5th and bring with him a number of Airline officials.

Bob and George have worked hard and long to get along with me at all. Bob put in several hours getting out our Master Plan outline. George, Bob, and Joe have all been busy on road work, painting, varnish and waxing, filing and inventory. Sholly has worked over his cactus bed and has it in nice shape for our summer visitor. Joe had a little experience with his snow fence and we have hopes of its doing much for us in our heavy winds. It is a little early yet to get anything definite but the early tests hold much promise.

In addition to some special road work necessary this month, we have a carpenter working on our library and lobby exhibits. Word has been received that the lights for the museum cases have been shipped from Berkeley so that will add greatly to our museum. Continuing with the painting, cleanup, moving our concession into the headquarters

unit, filing, many improvements suggested at the Conference, along with the visitors, we feel that March will find us plenty busy. Sholly will be on vacation most of the month and that will cut us down that much. Several days must be used for setting the stage for our annual "Play Day." All estimates anticipate a greater number than we had last year. We are looking forward to your being with us this year.

So Hugh, boiled down, lots of work. lots more to do, and lots of people, lots more expected, all is well, so what more could one ask.

-SWNM-

CHIRICAHUA

By Frank L. Fish, Custodian
Dos Cabezas, Arizona

Visitors this month, 650; travel year to date, 2636.

General: Visitors for the month increased 41.3% over the same period last year while out of state visitors almost doubled for the same period. From all reports that trickle in here, Arizona is enjoying a bumper visitor year. Faraway Ranch has been doing a good business this month.

We received two 10" x 12" enlargements from Joyce and Joseph Muench for our museum, and are we proud of them! We have been notified that the relief model for the Orientation station is on the way. That 1500# of cement is going to take some handling before it is in its proper place.

Weather: Precipitation totals 1.90 inches to date - about 1 inch less than the same period last year, but we feel that we have had more than our share of cloudy and foggy days, and our approach roads are showing the results of the continued rainfall.

Use of the Monument by the Public: Out of a total of 165 cars and 650 visitors, 77 cars and 341 visitors were from out of state. The month shows a total of 7 horseback trips and 24 visitors, while our single contact point, the Museum, comes up with 68 contacts, 238 visitors, and a total of 1475 minutes - an average contact of 21½ minutes. The Camp Ground, 3 parties, and 5 visitors with a total of 18 camper days. Both the Camp Ground and the Massai Point picnic area show moderate picnic usage but no exact records are available with our limited personnel. Four auto caravans totaling 46 visitors and 1 hiking party of 2 visitors completes the picture.

Visitor Statistics:

	<u>Cars</u>	<u>Visitors</u>	<u>Out of State</u>
1941	165	650	341
1940	113	460	175

Special Guests: Benjamin Cheney, Boston, Mass., was here for a short visit. He is still pursuing the old Butterfield stage route and is very

interested in the proposed development of Ft. Bowie as a Southwestern National Monument.

Park Service Visitors: V. W. Saari, Regional Forester and Dr. Luke S. Bill of the Bureau of Plant Industry, made an inspection on the 4th of the month.

Dr. Ross A. Maxwell and Natt Dodge were in on the 11th and 12th, collaborating on the preparation of data for our interpretative museum exhibits. Ross has since returned and maintains that our topography is doing things to his waist line. We also hear unkind remarks about the manzanita thickets, even though they are blooming profusely this year.

Johnwill Faris, wife and son stopped in on their way to the Custodians' Meeting.

Ray Ringenbach paid us a visit the first of the month.

Wildlife: Ross Maxwell reports seeing two Javelina hogs in the upper White Tail basin. He managed to get a long distance picture of them just to prove it. Here's hoping that the photograph is a success.

Maintenance: Removed 1 cubic yard of rock from the highway, after persuading it with a few sticks of dynamite. Graded $7\frac{1}{2}$ miles of road-way and the usual ditch cleaning. Gene Stonehocker saved our life with a new set of valves for the "Ancient" light plant. Received an oil filter for the grader and have various small parts on order for the same.

Miscellaneous: Foreman Brown and three enrollees from the Tucson CCC Camp took the much discussed Trailbuilder and winch off our hands. The two of them made more than a load for a two ton truck.

SWNM

BANDELIER

By James M. Eden, Ranger
Santa Fe, New Mexico

Visitors this month, 41; travel year to date, 1200.

February has been unusually dry and warm compared to December and January. Three light snow flurries and two showers gave us a total of only 0.14 inches of precipitation. The temperature records show a high of 57 degrees and a low of 11 degrees. The approach road is drying out; at the present time is almost passable. We saw the first robin one evening last week and "Mac" noted a flock of geese flying north, so possibly spring is not so far away, after all.

Pablita Volarde is turning out her own unique paintings one after another for the museum. She has completed all of those needed for Case #17 and is now working on #16.

Custodian Art Thomas left on February 16 to attend the annual Custodians' Conference at Coolidge. Art was fortunate enough to miss the several heavy snow storms the last time he went to Headquarters,

but so far since he has been gone the worst we have had is one light snow and a few cloudy days.

The maintenance crew has been busy painting the comfort stations, windows and door openings in the utility area and removing and mud plaster from portals around the Operator's development preparatory to plastering them with cement mortar. We hope that after such treatment these portales will present a neater appearance and the cost of maintenance will be lowered. All directional and informational signs around the headquarters area as well as those near the checking station are being repainted and given a coat of wood preservative.

Architects Bennett and Kell came out this month to secure information for the Master Plan and to go over the maintenance work.

During the next month we expect to complete plastering of the Hotel Portales and begin replastering the residences with the help of the maintenance crew. It is hoped that we will also have sufficient dry weather to permit patching the many leaky roofs. Pablita expects to complete several more paintings for Case #16.

I better not make any promises for Art, but I wonder if he might not make that property check we have been hearing about.

SWNM

BANDELIER

By H. B. Chase, Proj. Supt.
Santa Fe, New Mexico

Work on Residence No. 4 has progressed much better this month on account of better weather conditions. Vigas are all in place, the aspen ceilings on, and the roof deck built ready for asphalt roof. Stud and tile partitions have been constructed. At the time of this writing electrical work and plumbing is in progress.

Another 1000 lineal feet of stone gutter has been laid this month;

The addition to Residence No. 2 is now to viga height, with all vigas in place.

The carpenter crew completed the dry pit toilet appurtenant to the checking station the first part of this month. This crew has also completed window and door frames and doors for Residence No. 4. Work on various pieces of furniture and on the two residence construction jobs has occupied the rest of the time.

Rock quarrying has been going on as usual.

All during February we have been operating the tractor and grader on the road between the camp and the work project.

*****SWNM*****

AZTEC RUINS

By Ed Alberts, Relief Ranger
Aztec, New Mexico

Visitors this month, 162; travel year to date, 1639.

Opening: Custodian Miller, not having returned from the Custodians' Conference at date of writing, requested the write to prepare this report on scheduled date, in order that it might be received before the deadline. It would be tragic, indeed, for a report from Aztec to be received late, after over a decade of prompt and punctilious preparation. Accordingly, it is submitted without Cal's perusal -- it is probable that he'd refuse to sign this one, anyway.

General: Although the skies are grey, and the San Juan Basin has a drear and wintry aspect, travel is picking up, and signs of spring are evident -- the cottonwoods are budding, the air is filled with the cacophonous jabbering of Our Feathered Friends, and 8:00 A.M. ruins trips are becoming more frequent. Roads are drying up somewhat, and the approach to the Estes Arroyo Bridge (on the monument approach road) is much less of a quagmire. Attitude of local residents and visitors is cheerful, despite current world conditions, and hopes of a stabilization program for the Aztec Ruins make the Monument personnel breathe easier.

Visitors: Fifty-one autos brought a total of 162 people to the monument this month -- increase of nearly 50% over travel for same period last year. Of these folk, 115 were escorted through the ruins in 31 guided trips; 91 people were given 27 conducted trips through the museum; ticket sales total 81, giving visitor revenue for month of \$20.25. Forty-five people visited the monument but did not avail themselves of those facilities for which a fee is in effect. Among visitors this travel month were Adrian Van Sinderen and party -- he is author of "Vagaries and Verities." Only NPS visitor was Custodian McKinney of Chaco, in to borrow an un-blown-out tire.

Weather: Wet, but not bad for winter. Minimum of 9 degrees above was recorded January 25, and maximum of 55 degrees was noted several days last week. Precipitation for month totals 1.49", of which over half fell as snow. Only eleven days were clear, and it is generally believed that this has been the wettest winter in many a year for these parts. Range conditions are expected to be excellent this season, and great snowfields piled up in the high country at headwaters of the local river system promise ample irrigation water for the vicinity.

Roads and Trails: All main paved approach roads have been excellent throughout the month, but secondary and unpaved routes have been only barely passable most of the time. Treacherous appearance of the new fill leading to the bridge, at the junction of US 550 and the Monument road, has undoubtedly discouraged visitor attendance at Aztec Ruins.

The trail through the ruins is in good condition, although cracks and settling in certain sections will require early attention.

Personnel: Custodian Miller has been confined to his residence a few days with a bad dose of the "flu." However, he had recovered sufficiently to attend the Custodians' Conference, from which he has not returned at time of writing. Ranger Hastings has been on annual leave the entire period, engaged in academic pursuits in Colorado; Relief Ranger Alberts continues his detail at Aztec in his place. An NYA project has permitted Miss Georgia Eaker to work at the monument a portion of the month, rendering valuable service to the public in the museum.

Ruin and Stabilization: Due to the excessive precipitation, and sudden thaw, portions of the ruins may be seen falling to pieces before one's very eyes. Although in most cases this deterioration is not on a grand scale, and a casual examination might not indicate such a parlous state of affairs, actually there is hardly a foot of un-capped wall which has not suffered serious damage. In some rooms, several yards of material have sloughed off, and in the southwest wing of the pueblo, a huge section of wall and door have collapsed burying a wheelbarrow that had been temporarily placed there! Although this damage is perhaps not comparable to that which must have occurred in certain other areas, from the same natural causes, nevertheless it is in excess of what a decade of unregulated pot-hunting would produce, and stabilization is urgently required.

Equipment, etc.: The 1½ ton Chevrolet Dump Truck, USDI 1234, has been transferred back to Headquarters, Mr. Newell of the Arches CCC Camp having picked it up for this purpose early in the month. USDI 1235, Monument pickup, has had local shop repairs to brake and clutch. Material for installation of fluorescent lighting in two museum cases has been received.

Museum and Education: Aside from the regular interpretative program which has been continued through the month, certain desirable alterations in Cases 15 and 16 in the museum have been accomplished. Specimens of prehistoric textiles were sent by registered mail to the Denver Art Museum for technical examination -- results of this research when available to the monument would add interest to visitor talks. Through kindness of the Editor of the Desert Magazine, the museum's file of this interesting publication has been brought up to date.

Projects for ensuing Month: Expected increase in travel will require more time in normal educational activities of monument personnel, with concomitant extra cleanup work. However, it is planned to effect the installation of fluorescent lighting in museum cases 9 and 10; it is hoped that numerous leaks in certain rooms in the ruins may be sealed; patching of cracked and depressed areas in the ruins trail may be accomplished. This schedule will doubtless be augmented upon Custodian Miller's return from Conference.

WALNUT CANYON

By Paul L. Beaubien, Act. Custodian
Flagstaff, Arizona

Visitors this month, 101; travel year to date, 1027.

Of the 101 visitors, 57 were not contacted. Some were contacted more than once, giving a contact record of 71 per cent. Because of snow and rain, the east entrance road has been impassable without tire chains most of the month, and the west entrance road just some of the time.

The only Park Service visitors to register were Erik Reed and Art Thomas.

During the month, one trip was made to Shonto to pick up Jimmy Brewer, and one trip was made to Headquarters to attend the Custodians' Meeting.

In the fall of 1938, a few artifacts were recovered from some trail work in front of the two most complete dwellings. These artifacts have now been cleaned and catalogued. Some 30 pounds of sherds from the same source have been identified by the Museum of Northern Arizona. It was interesting to note that more than 93 per cent had been constructed by the "padle and anvil method." By checking the quantity of the various types with dates given in the "Handbook of Northern Arizona Pottery Types," by Colton and Hargrave, it seems that the period of greatest population was in the 10 and 11 hundreds, and that the canyon was abandoned by the cliff dwelling Indians about 1200 A. D.

Routine and Continued Projects, and Projects for Ensuing Month:

Cataloguing artifacts and preparation of nature trail signs should take most of my time. May attend the Annual Ranger's meeting of the Coconino National Forest, particularly the meetings concerning forest fires.

SWNM

MOUNT ELDEN CCC

By H. B. Stevenson, Proj. Supt.
Flagstaff, Arizona

Following is my report for the month of February:

Walnut Canyon: Work has continued on roads which are still in such bad condition that crews cannot reach the projects.

Sunset Crater: A large crew has been busy on road maintenance. This project has progressed very slow as it has been necessary to substitute wheelbarrows for dump trucks.

Wupatki: Custodian's Residence has been completed.

Excavation for the basement of the Administration building is

ninety percent complete.

Work continued in the rock quarry.

GRAN QUIVIRA

By Joseph H. Toulouse, Jr., Custodian
Gran Quivira, New Mexico

Visitors this month, 130; travel year to date, 637.

Visitors: We have had quite an influx of visitors this month, some three times more than a year ago this month, though the travel year remains somewhat behind.

NPS and Other Governmental Visitors: S. T. Carlson, Associate Forester visited at the monument during my absence at the Custodians' Conference on February 21st. Had two Border Patrol Inspectors, Inspectors Kile and Kincaid, drop by on the 15th. They were working out of Carizozo.

Weather and Roads: Have been fair during this period and may account for our visitor count for this period. But upon return from the Meeting had absolutely no roads, they were bottomless quagmires every inch of the way from Mountainair and I understand that they are also from Carizozo in here. These are the worst we have had since I have been here.

Acquisitions: Received two 2-inch square slides made from negatives of the "Boss" of the fireplaces in the "New" Mission right after excavation. The Custodian donated Volumes I and II of the New Mexico Anthropologist, Picture Writing of the Texas Indians, A Shorter History of New Mexico and number of other reprints to the Southwestern Monuments Association to be placed at Gran Quivira. Received a number of fine 8 by 10 inch prints of pictures taken by the State Photographer of Gran Quivira, Abo, and Quarai missions for the files. Received also a new hydraulic jack for the pickup, and a two tank metal cabinet for the proposed Propane installation. Obtained at Headquarters 1000 blank 3 x 5 inch cards for cross-indexing and bibliography, and several cartons for archeological survey sherds storage.

Routine and Continuing Projects: Installed the new gas stove this period, also cleared the sewer system of several stopped drains. Prepared a Bird Calendar for this monument and forwarded for the Naturalist Division files as also a list of the herbarium specimens now in our files. A number of books were prepared preparatory to sending off for binding. Road was maintained during the period by courtesy of the Highway grading crew. Some work was done on the pickup and shovel rack on the side made and shovel installed. The 8 by 10 inch photos from the State Tourist Bureau were sent here for their identification which information was sent back to them. Filing was

broken down into three drawers from two as conditions were becoming crowded. An outside of the monument lecture was given the Ft. Summer Rotary club on the 12th on the Custodian's day off, contacted 35 for 70 minutes. From February 17th to 23rd was on official business in regards to the Custodians' Meeting at Coolidge was accompanied by Homer Farr of Capulin Mountain National Monument. I must say that I thought this conference was quite the "berries" and was more interested than I thought I could ever be; certainly was an eye-opener also. The Rural Electrification Program for this area has finally been approved and we should be hearing something about the installation towards next winter.

Projects for Ensuing Month: Maintain signs on the approach roads. Give monument talk to Socorro Rotary Club. Work up new informational leaflet to carry us over until the new multilithed ones are available. Do something more on propane gas installation, this item will, however, have to await the pleasure of the weather. Continue with plans for minor exhibits in the restored room of the "New" Mission. Maintain the road into the parking area--or persuade the highway crew again.

SWNM

PIPE SPRING

By Leonard Heaton, Acting Custodian
Hocasin, Arizona

Visitors this month, 27; travel year to date, 337.

Monthly report time again and a little bit late as this month has three days less than the other months, and since I have been away the past week on official business at Headquarters attending the Custodians' Meeting.

There is not a great deal to report for the month of February in the way of travel and visitors to the fort. The total visitors to the fort is 27 coming in two parties, CCC boys coming in on the 16th. These were new boys that came in from Texas to fill up the ranks of the camp. I gave one lecture to the new boys on the 5th of the month at the camp having 66 present.

Storms this month have kept the roads in very bad condition; giving us only a few days of good drying weather. Of the 31 days of weather record since my last report we have had 16 cloudy days; 12 of them bringing rain and snow; 9 clear days and 6 partly cloudy days, with about 26 muddy road days, from the monument to Hiway 89.

The work on the monument has been that of sign making and cleanup of the old CCC camp site, of the lumber that was not removed last fall by the Park Service Camp at Mt. Elden. There are still some three or four truck loads of this old lumber. I have 9 signs carved and ready for the paint and installing which I think I will get done this coming month.

Some new equipment has been received for the monument to be used in connection with the restoration of the old fort in April.

Have had some trouble with the water system leading into the custodian's residence. The hot water system stopped up and had to be taken all apart, two other taps got plugged, and when I got into them I found it to be leaves and moss from the spring, so put a screen covering over the intake. Hope this will check any future trouble.

I had thought that my monument was in a pretty bad way when it comes to getting in and out over the roads, but since I have been to Headquarters and listened to the others in the "Outfit" talk, I have decided my place was as good or better than any of the others, and why complain as long as I have done my best. It is when we are idle that we kick the hardest and less satisfied with our monument.

SWM

SAGUARO

By D. W. Egermayer, Custodian
Route 2, Box 544, Tucson, Ariz.

Visitors this month, 2137; travel year to date, 6913.

Visitors: 2137 visitors, from 36 states, D. C., Canada, France, Belgium, and Germany. 475 persons, in 148 parties, contacted for a total time of 3199 minutes (22% contact). 61 picknickers.

Administration: Three days, February 19-21, spent at a very fine Custodians' Meeting at Headquarters; principal benefit - learning that other monuments have headaches also. One other official trip, to Organ Pipe on February 25, in company with Drs. Brown and Streets, and Mr. Paul Lightle, all of the Pathology Department, University of Arizona, to investigate diseases of Saguaro, Organ Pipe, and Senita cacti.

Official visitors included Regional Forester Sauri and Dr. L. S. Gill, of the P.P.I.; Matt Dodge, from Headquarters.

Maintenance, New Construction, and Improvements: Four days spent on road maintenance, necessitated by 3.28 inches of rain during the month; roads still only in fair shape. Part of one day spent repairing fence at old north gate - only cut once this month. Part of another day spent on signs. No new construction, no improvements (and no doors hung). Approach road in very poor condition all month; the county graded it once, for first time in three months, and the job did not last three days, due to rains.

Cooperating Agencies: The University of Arizona continued its work on the study of bacterial disease through the month; it is understood that a proposal has been made that the B.P.I. assist in this work, to insure continuity of the study in future years.

New Equipment: Four steel cots; two pairs pack-bags; three pack cinches; four pack covers.

Work Proposed For Coming Month: Preparation for coming fire season; hiring lookouts, packing hay and grain to Manning Camp Ranger Station. Fencing of portion of west boundary of monument. Attendance at Coronado National Forest Fire School (2 days). Contacting visitors.

SWNM

CASA GRANDE

By A. T. Bicknell, Custodian
Coolidge, Arizona

Visitors this month, 2889; travel year to date, 8427.

Weather: February started out with clear days and cool weather, but is ending up with some more of the "unusual weather" we are having this year. The minimum temperature for the report period was reached on the first with a temperature of 35 degrees. A maximum of 77 degrees was recorded on the eleventh. Precipitation for the period was 1.79 inches as compared with .85 inches last year and .86 inches in 1939. A heavy fog on the sixteenth and thunder and hail during the storm of the nineteenth and twentieth contributed to the unusualness of the weather.

Use of the Monument by the Public: Our travel increase is holding up remarkably well and we note that the increase of 58% reported last month over the same period last year has jumped to 69% for this month. Out of our total of 2889 visitors, 2220 made the trip through the ruin in 226 different parties. The trips averaged approximately 45 minutes each. Lectures were given to 1537 people in the museum and these averaged approximately 24 minutes in length.

During the period we sold 2039 tickets for a total of \$509.75, as compared with 1536 (\$384) sold during February last year, an increase of 32%. There were 669 visitors who received no guide service at all and 683 visitors who received guide service only through the ruins and not through the museum.

All states except Mississippi and South Carolina were represented this month. There were also visitors from Hawaii, Porto Rico, Chile, France and England.

Park Service Visitors: Too numerous to mention.

Visitors of Special Interest: 2-9-41. Mr. James P. Welsh, "The Old Traveler" from the Automobile Club of Michigan was a visitor to the Monument. He took several photographs to be used in his lectures in Michigan.

Natural Phenomena: Casa Grande National Monument is greener than it

has been for many years. A few flowers have started to bloom and give promise of a great many to come as spring advances.

General: Ranger-Historian Elmore completed and sent in an article on Casa Grande National Monument for the March issue of the Arizona Highways Magazine. Photographs were furnished by Assistant Naturalist Natt Dodge. Ranger-Historian Elmore also completed plans for a museum case to house transparencies. On both the 9th and 23rd of the month total paid admissions were 128, the greatest number since March 17, 1940, when there were 135 admissions.

Ranger-Historian Elmore lectured with Assistant Naturalist Dodge at Miami Lodge, Scottsdale. Subject: The Prehistoric Inhabitants of the Gila and Salt River Valleys.

Administration: The custodian has received plans for the construction of gates and signs at Casa Grande. Plans were also received for contour Dike and Furrows for Soil and Moisture Conservation. We are in hopes that these will help to increase as well as preserve the vegetation on the monument.

Maintenance: Work was continued on the Superintendent's office and is now 98% complete. The emergency repairs, due to floods, on the sewer system is complete with the exception of painting, grading and landscaping.

The bath house roof at the CCC camp was repaired along with the preparation for the custodian's school of instruction.

Two signs were touched up and three removed. Repairs were made on the electric stove in the superintendent's quarters and valve facings replaced in the assistant superintendent's quarters. Fluorescent lights and venetian blinds were installed in the Headquarters Offices. The assistant superintendent's office was kalsomined and some touching up done in the chief clerk's office.

During the coming month we have hopes of getting our SCS program under way.

The usual guide and contact work will take most of our time for the next month.

-SWNM-

CANYON DE CHELLY

By Charles D. Wyatt, Custodian
Chin Lee, Arizona

Visitors this month, none; travel year to date, 357.

Weather: Still lots of rain but with a high maximum of 62 degrees reminds us that spring is just around the corner. What a glorious spring it will be with wild flowers galore. The minimum temperature was 25 degrees.

Administration: The most important event during the month was of course the Custodians' Meeting at Coolidge - a worthwhile and instructive get together. This one was the writer's first and gave him a lot of good sound instruction.

Application was made during the month for a 25-man unit of the CCC - ID to improve two roads and trails in this area, construct a campground, and miscellaneous buildings which would include a public comfort station, addition to the custodian's office and a utility area.

Maintenance: The White House trail was put into first class condition for the coming season during the first part of the month. The work included considerable resurfacing, sealing work on the tunnels and relaying all the retaining walls.

The patio of the residence was cleaned up and prepared for planting. A flagstone floor was laid under the ramada and walks through the patio. It is planned to plant exotics in the patio since it is out of sight of any visitors.

Seven trees were planted around the residence to soften some of the building lines and provide a little shade during the summer.

Five doors of the residence and office were planed down to fit the openings. These rains are making a lot of work in more ways than one.

One trip was made to Gallup during the month for butane, fuel oil and, incidentally, groceries. This was a trip to end all trips as the load consisted of 10 tanks of butane and 250 gallons of fuel oil.

Use of the Monument Facilities by the Public: Once again we hang our head and admit that our visitor count was zero for another month. But when mail service is suspended you can gain an idea how bad the roads really are. The road from St. Michaels to Ganado has been closed since the first of February.

Protection: Patrol trips were made to White House ruin four times during the month and once to Mummy Cave on horseback. On February 20th the son of C. Garcia, one of our operators, attempted to drive up the canyon in his car, a 1923 Dodge. He got as far as the window and once again the same old story - the motor was drowned out and in a matter of minutes the car was nearly out of sight. Salvage was impractical so there it will sit until some of the canyon Navajos dig it up and use the frame for a wagon.

*****SWNM*****

EL MORRO

Mr. Robert R. Budlong, Custodian
Ramah, New Mexico

Visitors this month, none; travel year to date, 171.

February has been a very quiet month. There is little to report.

Weather: Words fail me. This is the eighth day of steady snow, with only a few hours' cessation three days ago. Temperatures have been quite high, maximum being 56 degrees, on the 11th; minimum was 5 degrees, on the 2nd. The snow is melting steadily, but all moisture seems to be going into the ground, with little run-off. We had a total of 18.25 inches of snow this month. There has been a little rain, some hail, lightning, thunder, and fog.

Roads: Mail reaches us occasionally, coming in from Ramah via tractor. The mailman reported on the last mailday that it took a tractor and truck six hours to negotiate the last six miles into Ramah. The round trip from there to the Monument, via Fence Lake, has averaged four days each trip.

The only item of news is the custodians' school at headquarters, which we were unable to attend, being unable to get out. We hope to hear about it in the published report.

During the month large quantities of seeds of wildflowers -- about two pints of seed -- were planted by sowing them on the snow where run-off would not occur. These seeds were gathered last season. A few bluebirds and robins have been seen, and a few red-shafted flickers.

The furnace and chimney were again cleaned of a huge accumulation of tarry soot. Numerous minor repairs were made to plumbing fixtures; some patching of plaster in shrinkage cracks was done.

Work has commenced on cataloguing of the El Morro Library. This now contains in excess of two thousand volumes; the work takes much time, and promises to take more. Correspondence is current. During the month an illustrated report was submitted on the Kit Carson inscription in Keams Canyon.

It is still snowing.....

SWNM

TUMACACORI

By Louis R. Caywood, Custodian
Nogales, Arizona

Visitors this month, 1391; travel year to date, 3798.

General: Our "unusual" weather continued throughout the month of February with six days of heavy rains and as many days of complete cloudiness. Lightning and thunder have accompanied every storm.

Warm weather has continued and vegetation is again turning green, including a new crop of weeds. The cottonwood trees along the Santa Cruz river are already green with their new leaves.

So much rain has fallen that the country will be greener than it has been for many a year. A superb flowering panorama should be seen on the desert this spring.

The Tucson Rodeo was rained out on February 22. Events that should have taken place that day were continued to February 23 and 24.

The custodian spent three full days, February 19, 20, and 21 at Southwestern National Monuments headquarters at Coolidge attending a meeting of Custodians of Southwestern National Monuments. Part of one day was spent in travel to Coolidge and part of one day in return to Tumacacori. A splendid meeting was held and much valuable information was gleaned. The Headquarters group are to be congratulated on the entire program. The return to Tumacacori was made in a continuous downpour of rain.

Travel: In spite of bad weather there was an increase in travel over that of February, 1940, from 1200 to 1391. Of this number of visitors 1380 went through the mission in 255 parties and 1388 went through the museum in 258 parties. Arizona visitors amounted to 208 people. In addition to the number of actual, bonafide visitors we have this month kept account of those who drove in the parking area and used the facilities or tried to look over the wall at the mission from their cars. A count of 472 people in 117 cars was made of such lookers.

Park Service Visitors: Three Park Service groups visited Tumacacori during the past month. Associate Regional Director M. J. McColm and Mrs. McColm were here on January 26. Park Naturalist Louis Schellbach of Grand Canyon National Park was here on January 30 to see for himself what the museum looked like. Mr. Schellbach considered time on the museum plans and exhibits while they were being prepared in Berkeley, California and has a fatherly interest in the Tumacacori Museum. He reported many fine comments from visitors on our museum. Custodian and Mrs. John Will Faris and son were here on February 17 to see the museum. We enjoyed their visit and were sorry it had to be so short.

Maintenance: Routine maintenance was continued throughout the month. An oak threshold was replaced in the men's restroom by Ranger Harkins. With the heavy visitor travel period here to projects can be planned and carried out.

Museum Accessions: During the month a large copper kettle was received from Dr. Emil Haury of the Arizona State Museum as a loan. This kettle is reported to have been used by the Spaniards in very early times for boiling in the manufacture of sugar from sugar cane. It has been placed in the patio garden where it attracts much attention.

MONTENZUMA CASTLE

By Earl Jackson, Custodian
Camp Verde, Arizona

Visitors this month, 318; travel year to date, 1902.

One hundred twenty-two tickets and one annual pass were sold. Twelve children went into the Castle free as under age, so that 134 persons entered the building. No complimentary passes were issued. Visitors arrived in 96 cars, of which 35 were from Arizona. Twenty states, as well as France and Germany, were represented.

On February 17 Custodian and Mrs. Art Thomas, of Bandelier National Monument, were interested visitors. On February 25 Construction Foreman Mullenau arrived to study fencing problems for this monument.

February 17 brought in Harold Linn, of the Beaver Creek Ranger Station, U. S. Forest Service, to discuss matters in which we have joint interest.

Weather and Roads: Temperatures have been without extremes, with a high of 70, a low of 27, a mean maximum of 61.96, mean minimum of 35.70. Fourteen cloudy and 7 partly cloudy days produced a total precipitation of 2.13 inches. The country is very wet, wetter than I have seen it in at least 20 years, and is also more beautiful for this time of year, with dense carpets of wild mustard blanketing the Castle grounds, standing in places to waist height. All incoming gravel roads have been quite slippery several times this month, and practically no travel has come over Black Canyon Highway or from the Apache Trail. There is still no travel from the Lakes route. WPA construction on a short section of road near McGuireville continues, and in wet weather visitors complain it is so slippery as to constitute a real hazard.

Routine and Continuing Projects:

1. A large ladder leading into dangerous upper levels of Castle A (The cliff ruin just west of the Castle) was taken down and made over into a smaller ladder to lead into another interesting cave of the group.

2. All repair work necessary in Montezuma Castle for 1941 was accomplished by Ranger Baczuk and myself.

3. Considerable pick and shovel grading between the two residences was done, so as to make a yard between the two houses instead of a hillside.

4. Most of the work toward digging 200 feet of trenches at a point on top of the hill where the power line joins our underground cable was done. These trenches are for more adequate ground wire to take care of overload in summer electrical storms.

5. A cement sill was put in at an opening of the Ranger residence which has admitted rain water to the floor of the house.

6. An inventory of tools and equipment was made in the garage.

7. In the office, the custodian wrote an article on "The National Park Service and the Defense Economy," for presentation at a school of

instruction for custodians at Southwestern National Monuments Headquarters. The library was entirely rearranged and labelled, and about two days work went into assisting in preparation of a bird calendar for the monument, material for which my wife has been gathering for over four years.

During the following month we will complete excavation of power ground trenches on top of the hill, will repair two sunken areas in the parking area road, and will try to revise the Nature Trail and its labels. Also, routine work will be kept current. It is expected the custodian will have to spend some time doing book work for a 2000 foot gutter construction job which is to start in a few days on our entrance road. It is also expected, from the way visitors are arriving in clear weather, that we will both be fairly busy just taking care of the public.

Personnel: The custodian was absent from his post from February 18 - 22 inclusive, while attending the Custodians' Meeting at Headquarters. This meeting was of great value, and a great deal was learned. It is hoped future schools of this sort may be held.

Acquisitions: Several glass shelves for museum cases were received from Custodian Art Thomas of Bandelier National Monument. Also, we received a fluorescent lamp and fixtures to use in one of our museum cases.

Miscellaneous: Travel dropped a little compared with February of 1940. I doubt if this is any indication of fewer people travelling, but rather think the drop here was due to more stormy weather than usual. Visitor interest continues good. In fact, one person was so interested in the Castle that she insisted on climbing the ladders and spending nearly two hours "seeing" it, although she is completely blind. I think she "saw" more through her finger tips than most people do with their eyes. She made the trip without difficulty.

Complete monument patrols reveal no evidence of vandalism. Work here is current, and we are looking forward to a busy and active season, what with visitors increasing with spring weather, and a gutter building job due to start, a fencing job expected soon, and a small job of picnic ground improvement and landscaping pending.

*****SWM*****

TUZIGOOT

By Jack Cotter, Custodian
Clarkdale, Arizona

Visitors this month, 492; travel year to date, 2631.

Visitors: Things are still looking up at the monument, with this month's total of 492 visitors to compare with 357, same month last year.

Tuzigoot was kept open throughout February, the NYA force being detailed to work and maintain visitor contacts at the same time. Apparently, the boys did a pretty creditable job the four days the custodian was at the Conference at Headquarters, since the two delegated to act as guides contacted 25 visitors and proudly displayed two dollars in the publications till which they had garnered. The remaining workers completed minor repairs on the walls of nine rooms despite rain which fell occasionally on all four days. The monument was in good order upon the return of the custodian February 22.

We were mighty sorry the Leonard Heatons could not stay longer when they dropped in the 17th. But they were on their way to the Custodians' Meeting and there was no stopping them.

Stabilization: Although the NYA crew has sloughed off to seven from the ten workers of last month, there was considerable progress in the repair of rain-eroded walls. We are more relieved than proud to be able to note that all major stabilizations have been completed on rooms of Units I, II, III, IV and V. This leaves only Unit VI, at the bottom of the hill unstabilized, a job which is not, however, pressing just now. All stabilization is now done with adobe and waterproof cement, the linseed oil treatment having been restricted to preserving intact adobe.

NYA Program: Now that stabilization needs have been met in all exigent cases, NYA work will be extended next month to the building of a new masonry sewer top over the existing pit at the bottom of the hill. The boys are now in the midst of a project to treat all exposed and unpainted timbering, including window frames in the museum building with linseed oil. Outdoor signs on the monument have already been so treated. One of the NYA boys who has some garage experience has been delegated to keep the car (USDI 1223, surnamed Mehetabel) washed and waxed, and perform minor repairs. Next project is to mount the four new tires which have arrived for Mehetabel, who will probably quiver her fenders off with sheer joy when she tries them out.

Museum Projects: With a wife to share his trials and tribulations, the custodian is now ready to begin extensive improvements in the museum. All labels are to be revised and printed, a new pottery chart will be designed, and plans for a large diorama will be submitted for consideration at Headquarters.

Road Improvement: Having lost a total of half a month in the last five months due to an impassable approach road, we are glad to state that Mr. Ralph Reed, County Supervisor, and his road men have agreed to gravel the road pending permanent disposition of the easement to the Government, State or County.

SWIM

WUPATKI

By David J. Jones, Custodian
Flagstaff, Arizona

Visitors this month, 165; travel year to date, 781.

Travel: Travel has doubled during the past month, and when compared to the same period last year, shows an increase of 38%. At the Citadel 108 persons registered, 90 at Wupatki, and 33 names duplicated on both registers. Of the total travel 127 or (77%) were from out of state. Seventy persons visiting Wupatki received guide service.

General: Highlight of the month was the meeting of the Custodians at Coolidge. For those of us who have but little personal contact with Headquarters such a meeting is highly beneficial in coordinating our activities and increasing efficiency. My meager contribution to the program was a brief report on the Naturalists' Conference held at Grand Canyon this fall. Afterwards we took four days of annual leave and then returned to Headquarters for a day to discuss Wupatki problems. In our absence CCC guide Bossick acted as caretaker and guide.

The fellows at Headquarters seemed very disappointed to find that we had actually managed to return USDI 1261, which was loaned to us while the Wupatki pickup was being overhauled. I must admit that we just did get it back in entirety, and that it is a great pleasure to again be driving a car that is sound.

Experimental signs were completed during the month and will be set in place shortly. Letters were cut from several different materials and attached to backgrounds. If the letters are not stolen by visitors and if the materials withstand weathering, it might be possible to use this type of sign when the routed sign is not available.

Research: Plans progressed for the proposed excavation of Wupatki Ruin which was made possible through a contribution by Mr. A. E. Buchenberg of Patagonia, Arizona. Regional Archeologist Reed, accompanied by Dr. Colton of the Museum of Northern Arizona, visited Wupatki and we had an opportunity to discuss the program in detail. At Coolidge we had another session with the Headquarters staff and Mr. Buchenberg, and the final data will be submitted shortly.

Stabilization: No further progress was made on the E. wall of Room 41 at Wupatki, but the stabilization of the NE corner of Wukoki was completed. The masonry underneath the corner was covered with

dirt and rock so that it is not visible.

Roads: Since many of the CCC enrollees were available during the first part of the month, two short-cuts on the main road to Highway 89 were blocked. Navajos and CCC drivers develop these roads down the cinder hills and visitors often try them during the summer; succeeding only in getting stuck.

With the aid of a CCC crew a new trail was constructed to Wukoki Ruin and the roads within the immediate vicinity of the ruin obliterated. The old road was objectionable because it passed too close to the ruin.

Water Supply: Both of the springs on the monument are producing a greater flow than has ever been recorded. Last month Heiser decreased to less than 400 gallons per day. Investigation resulted in finding the outlet pipe clogged with the root of a Saltbush, and the spring is now flowing 2160 gallons per day. This is far above the average winter flow of 1375 gallons per day, but this is an exceptional year for moisture.

NPS Visitors: Official inspections were made by Landscape Architect Albrecht of the Washington Office, Regional Archeologist Reed, Senior Engineer Proeco, Regional Engineer Diehl, and Forester Balch.

Other visitors included Consultant Eddie McKee, now of the Museum of Northern Arizona, Ranger Dice of Grand Canyon, Dr. and Mrs. Harold S. Colton of the Museum of Northern Arizona.

Navajos: Gladys Begay, the girl who had been sick all year, died while I was on annual leave and was buried in the same hogan as Peshlakai Etsedi by Foreman Higgins and a CCC crew.

Navajos are quick to take advantage of gratis services. Through the "grapevine" the word spread to Grey Mountain that the CCC buried people. The other night a truck drove up to the Heiser Side Camp with a body and a Navajo announced that it was the body of Clyde's brother-in-law (he has a good many). The foreman buried the body all right, but this will be the last one, if they are going to bring them more than forty miles.

SWNM

SUNSET CRATER

By David J. Jones, In Charge
Flagstaff, Arizona

Visitors this month, 141; travel year to date, 1392.

Travel: Travel to Sunset Crater increased 35% over the same period last year. This month the travel estimate is based upon actual registration as CCC crews have been working in the monument most of the month and have made an attempt to request that all visitors register.

Of entire travel 133 or 94 % were out of state.

Roads: Considerable improvement has been made on the entrance road by the CCC crews; however, they have been handicapped by the lack of equipment for road work. Nevertheless ruts have been filled, cinder spots covered with clay, and many of the rocks removed.

General: General data for inclusion in the Master Plan was submitted to the Superintendent. A CCC enrollee discovered a fissure in the lava to the south of the present ice cave that might lead into a tunnel containing ice. This will be investigated when time permits. Foreman Jordan made an unusual discovery northwest of Yaponcha Crater. It is a small gas vent that was apparently blocked at one time and the pressure of the gas formed a "bubble" at the outlet. More about this after we see an authority or two, but it makes a swell exhibit-in-place.

A donation of six Kodachrome slides of Sunset Crater was received from Mr. E. T. Nichols of Tucson, Arizona. From the Headquarters files three duplicates of various features at Sunset were obtained.

SWNM

CHACO CANYON

By Lewis T. McKinney, Custodian
Chaco Canyon, New Mexico

Visitors this month, 0; travel year to date, 185.

After fighting mud all month, and a trip to Headquarters to attend the Custodian's School, I have finally ended the month by going to bed with a bad case of flu. It seems funny that a big overgrown lad like myself should let a little thing, like staying out on the road, (what used to be a road) for three different nights, and wading through mud and water for 10 weeks get him down.

The Custodians' Meeting was a great success as far as I am concerned. I learned new words, new ways to argue and still be considered a gentleman and how to get by Zeke without costing me a dime.

Eight visitors made it into Chaco this month, came in on the 26th of January to see what Threatening Rock looked like after the crash.

Dale King, Jim Hamilton, and Erik Reed dropped in last month to set Threatening Rock up, but couldn't find all the pieces, so went on back after the bean supply had played out. Carroll was here too, that is why they had to leave sooner than they expected.

Weather: Mostly rain this month, with enough snow to keep everything good and sloppy.

Roads: Don't try them, because they are getting pretty bad for the wife to drive on. (while I push).

CHACO CANYON CCC

By Claire J. Mueller, Sr. Foreman
Chaco Canyon, New Mexico

I herewith submit the following monthly report for February, 1941 on Chaco Canyon National Monument, Camp NP-2-N.

To date the month of February has been the best of all the winter months. We have been able to work all but two days.

On January 28th work was begun on the construction of a truck trail to the proposed Headquarters Area, and is progressing nicely.

No visitors have called on us during the month, unfortunate too, for we spent several days getting the road in shape. The south approach road was good until the rains came last week. Now it is barely passable. The north road is still closed to traffic.

Superintendent Phelps and Foreman Bililland spent a few days in Santa Fe, where they took the "Explosives" examination.

Mechanic David Christie has been confined to his bed with an attack of gall stones. At this writing he is still in bed, but is making grand progress on the road to recovery.

Foreman Hayes is getting along well with the "El Morro" signs project.

During February work was done on the following projects: Guide and Contact, General Cleanup, Boundary Fence, Maintaining Roads, Maps and Models, Rock Quarry, Entrance Road "C", Signs and the Headquarters Road.

-SWNM-

MOBILE UNIT

By Gordon Vivian, Sr. Foreman
Chaco Canyon, New Mexico

This must be the month when the winter snows merge more or less imperceptibly into the spring rains...at least it is much warmer and very wet. This excessive moisture has hampered us somewhat. We have been unable to complete sanding of the east plaza since we can neither drive into the plaza nor get out to the Escavada for sand. Larger support jobs involving concrete and planned for rooms in the northwest section have had to be postponed since travel to the San Juan for aggregate is impossible. It looks as though this situation may continue for some time and we understand that the pass at Crownpoint has been closed by the State Highway Department.

This confines us more or less to work that can be done with materials at hand and has included during February minor support work throughout the central wing surrounding kiva A and the outer tier of rooms along the west plaza and those in the southwest corner. The major jobs in this area, cores, buttresses etc., had been completed previously and the present work is intended to bring all work on the walls to final completion.

HEADQUARTERS

BRANCH OF HISTORIC SITES

By Dale S. King, archeologist,
Coolidge, Arizona

PERSONNEL

Archeologist King spent the greater part of the month working on two-fold leaflets and ruins stabilization administration at the Headquarters Office as well as spending eight days in preparing for and participating in the Custodians' Meeting. The first two and a quarter days during the month comprised the end of the field trip to Chaco Canyon to determine damage done to Pueblo Bonito through the fall of Threatening Rock.

Archeologist Steen spent the entire month at Headquarters, working seven and one-quarter days on the photographic file, slightly more than four and a half days on ruins stabilization administration, and about seven days on the Custodians' Meeting.

Naturalist Dodge prepared two papers for the Custodians' Meeting, spending in this and related activities almost thirteen days. The remainder of the month was spent in routine affairs except for three days of field trips during which Saguaro and Chiricahua National Monuments were visited.

110 - NEW OR UNUSUAL ACTIVITIES; CONFERENCES

The major activity of the month on the part of all staff members was preparing for and participating in the Custodians' Meeting. From reports by field men it is judged that this meeting was a marked success.

One emergency job was completed with the printing of pictures of the fall of Threatening Rock to accompany the inspection report to the Region III and Washington Office. With limited darkroom facilities at Headquarters, Naturalist Dodge was forced to loan the use of much personal equipment and worked under difficulties.

150 - PLAN AND PROJECT STUDIES; TECHNICAL AID IN DEVELOPMENTS

The interpretive program outlined for Organ Pipe Cactus National Monument, prepared last year, was revised for inclusion in the Master Plan for this year.

A comment was prepared supporting the suggestion by Archeologist Erick K. Reed that Gran Quivira National Monument be enlarged to include sister missions of Gran Quivira and to change the name of the area to Salinas National Monument.

412 - PUBLIC RELATIONS

Small projection slides were loaned to Mr. Frank Evans of Indiana who expressed great satisfaction as to their excellence. Mrs. Amelia Bartlett of Tucson was furnished with considerable informational material for distribution to winter visitors. Mr. A. E. Buchenberg returned from Ohio bringing back the slides which he had borrowed and with which he had made many talks before various groups concerning Southwestern National Monuments.

413 - EXTENSION SERVICES

Naturalist Dodge presented illustrated talks as follows:

January 31: Phoenix Rotary Club, 1 movie reel, 150 persons.

February 2: St. Anne Mission, 5 reels, 125 persons.

February 7: Miami Lodge, 2 reels and slides, 18 persons.

February 25: Casa Grande Rotary Club, 2 reels, 14 persons.

Mr. Dodge was assisted by temporary Ranger Francis Elmore on two of these talks.

421 - PROGRESS OF EXHIBIT PLAN PROJECT

Naturalist Dodge spent approximately a day and a half at Chiricahua National Monument with Regional Geologist Maxwell going over the interpretive angles of the monument in relation to geological studies which Dr. Maxwell intends to pursue.

Considerable aid was given to the staff at Casa Grande National Monument in preparing a revision of the reptile case in the museum.

422 - LOANS, GIFTS, ACCESSIONS

An excellent set of 22 reference volumes in anthropology were received as a gift from Mrs. Blenda Fast from the estate of John Fast. Gila Pueblo through the kindness of Mr. Harold S. Gladwin donated a representative series of identified sherds from the Gila valley. These will round out the Casa Grande collections, giving us for the first time the types of the pioneer period from Snaketown.

A full set of up to date state maps were received from the Conoco Travel Bureau, Denver, Colorado.

440 - COOPERATIVE RESEARCH AND OBSERVATION

Cooperation was extended the Colorado Museum of Natural History which plans to send a field study group into the Southwest this spring. It is probable that the group will spend some time on Saguaro National Monument.

450 - SOUTHWESTERN NATIONAL MONUMENTS LOAN LIBRARY

A total of 67 publications were added to the library: three reprints, twelve pamphlets, 29 periodicals, and 23 books. They were not catalogued, due to lack of time, and the cataloguing process now is extremely in arrears. Moreover, additional bookcases must be purchased in the next few months to handle the increased number of publications on hand.

460 - SOUTHWESTERN MONUMENTS ASSOCIATION

Considerable work was performed during the month by Luis Gastellum who is making the audit of the Association's books. This is an arduous job and Mr. Gastellum deserves our sincere thanks.

Book work of the Association fell considerably behind but will be caught up next month when the audit is finished.

470 - PHOTOGRAPHY AND OTHER VISUAL AIDS

A number of color slides were exposed to obtain a representative sampling of the unusual flower display which will occur this spring due to heavy winter rains.

502 - NEWSWORTHY VISITORS

William Supernaugh, Charles Wyatt, Louis Schellbach, Louis Caywood, David Jones, George Sholly, Everett Underhill, and Hadley of the Indian Service, Palmer of the Forest Service, and Dr. Lowdermilk of the Soil Conservation Service.

STATUS OF ARCHEOLOGICAL PROJECTS

A report on the fall of Threatening Rock was prepared and sent to Washington.

The bound volumes of ruins stabilization on Pueblo Bonito during 1940 were received and distributed.

COMPLETED PROJECTS

Manuscripts and accompanying material for two-fold leaflets were submitted to Region III for the following monuments: Gran Quivira, Pipe Spring, Wupatki, and Navajo.

PROJECTS FOR THE ENSUING MONTH

King will finish the preparation of submissions for two-fold leaflet copy, will prepare several ruins stabilization reports for binding, and on spare time will touch the Southwestern Monuments Association book work. He hopes to begin the Walnut Canyon museum exhibit plan so that he could leave toward the end of the month for Montezuma Castle to work there on the Montezuma exhibit case installation and the Walnut Canyon museum plan concurrently.

Archeologist Steen will finish the manuscript for the two-fold leaflet for Canyon de Chelly, will assemble the manuscript for the 16-page booklet for Casa Grande, and will prepare the museum material survey desired by the Washington Office for Casa Grande National Monument. He will also assemble the reports from field museums on this project.

Naturalist Dodge will spend on routine projects as well as starting work on the museum prospectus for Arches National Monument and working on the plans for two table cases for White Sands

BRANCH OF ACCOUNTING

By Parke W. Soule, Chief Clerk
Coolidge, Arizona

Vouchers prepared during the month, regular appropriations . . . , 119
Vouchers prepared during the month, CCC 154
Purchase Orders issued, regular appropriation, Hdqrs. 73
Purchase Orders issued, CCC 115
Allotment ledger sheets prepared, regular appropriations. 207
Allotment ledger sheets prepared, CCC 110

Expenditures:	Total for Month	Total to Date
1411000 National Park Service, 1941	10,305.52	80,342.49
140/11000 National Park Service, 1940-41	158.28	1,308.75
14x1010, Roads & Trails, NPS	1,447.58	5,154.96
Civilian Conservation Camps	<u>9,545.45</u>	<u>68,323.09</u>
Total	21,456.83	155,129.29

SWNM

BRANCH OF MAINTENANCE

By F. E. Stonehocker, Gen. Mechanic
Coolidge, Arizona

General Mechanic Stonehocker and S. and M. mechanic Johns were on the job the entire month, and during the Custodians' School of Instruction William Lee was employed $3\frac{1}{2}$ days.

On the Wupatki Ford USDI 1241, 42 hours were used to complete the general overhaul job started last month.

Sixty-six hours were spent to complete the mechanical emergency repair work on the sewer system due to the damage done by the flash floods during January.

New door glass was installed on USDI 1222, a six hour job.

The overhaul job on USDI 1237 was completed using 68 hours of labor.

Sixty-eight hours are charged to the general overhaul job on USDI 1251.

Eight hours are charged to general cleanup throughout the month, also four hours to preparation for the Custodians' school.

During the 18-19-20- & 21, the Custodians' school, all were busy doing minor repair work on the cars from the field, transferring property in and out, and servicing equipment.

The heaviest work was the rear end job on USDI 1248 and various work on USDI 1233. Along with this general work repairs were made for the Chiricahua light plant.

Two official trips were made by the general mechanic to Phoenix for repair parts and supplies. Clerk Ringenbach also helped out with a trip to Phoenix for the parts for USDI 1248.

VISITOR STATISTICS AND INTERPRETATIONAL CONTACTS

Station	Visitors				Interpretations				Other				Total
	Per	Tem	No.	Att.	No.	Att.	No.	Att.	No.	Att.	No.	Att.	
Arches	1	-	2	13							610	13	44
Capulin Mountain	1	-	5	48			68	238			500	62	100
Chiricahua	1	-									1475	286	650
Natural Bridges	-	-									-	-	-
Organ Pipe Cactus	1	-	5	13			2	8			2100	21	1025
Rainbow Bridge	-	-									-	-	-
Saguaro	1	-					148	475			3049	475	2137
Sunset Crater	-	-											
White Sands	3	-								141		141	141
Sub-total	8		12	74			218	721			7734	998	7034
Aztec Ruins	2	1NYA	31	115	27	91					2035	206	162
Bandelier	2		10	40	5	26					788	66	41
Canyon de Chelly	1										-	-	-
Casa Grande	2	1	226	2220	185	1537				726	15643	3757	2889
Chaco Canyon	1	1C	1	8	1	8					125	16	8
El Morro	1										-	-	-
Gran Quivira	1		22	130	2	37					843	164	130
Gila Cliff Dwellings	-	-									-	-	-
Hovenweep	-	-									-	-	-
Montezuma Castle	2		74	227	54	212					4559	439	318
Navajo	1										-	-	-
Pipe Spring	1		2	27	1	66					100	93	27
Tonto	1		121	499	106	601					7920	1100	1040
Tumacacori	2		255	1380	258	1388					10975	2768	1391
Tuzigoot	1	1NYA	148	474	144	469					4783	943	492
Walnut Canyon	1	2C	2	8	6	18					445	62	101
Wupatki	1	1C	23	75	1	2				108	1245	185	165
Yucca House	-	-									-	-	-
Sub-total	20	7	915	5203	790	1455				834	49461	9799	6764
Grand Total	28	7	927	5277	790	1455	218	757		975	57195	10797	13807
Last year	25	8	1243	5372	1081	4618				872	65950	10000	12255
											55506	9794	11556

Branch of Res. & Int.

Branch of Historic Sites

PERSONNEL NOTES

Seasonal Ranger Elmore comes forward with "the question of the month" asked him by a visitor to the Casa Grande recently. "What", the visitor queried, "was that bird I saw down the road? It was about a foot long, shaped like a flying cigar, and was black at both ends."

Joe Golden wants to know who this Hildegard Hall is from whom the boys in the Interpreters Office keep getting packages. Joe says he's going to look her up when he goes to Berkeley where she lives, judging from the postmarks on the packages.

Speaking of Joe reminds us that Helen Golden cut quite a figure at the Custodians' Banquet; or rather half a figure. Earl Jackson constituted the other part. We don't know just how much Helen weighs or how short she is, but Earl makes fully two of her, either way you measure.

Carolie McKinney reports the banding of a road runner during the month. She says Mac ran it down. We knew Mac had big feet, but didn't realize that they were webbed enough to hold him up on top of that Chaco mud while the road runner bogged down.

Howard Reiber reports that the army hasn't grabbed him yet, although he expected to be under canvas soon after this report came out.

Bob Upton, our newest recruit at that Sand pile near Alamogordo, is having his turn at trying to be born for personnel record purposes. Most of the men in the field, Hank Schmidt being no exception, should get a kick from the following clipping which Bob sent in recently.

PROVING YOU ARE ALIVE

There are various ways of priving that you are alive:

You can work hard when your Boss is looking.

You can talk loudly.

You can exhibit the bills sent you on the first of the last preceding month.

You can join the Chamber of Commerce.

You can get somebody to say he saw you on the corner of Fourth and Central.

Or you can get a birth certificate.

Note: If you are a long-lived person, you may be able to get the birth certificate during your lifetime. But if not, you can leave word for it to be delivered to your heirs, who might need it in order to prove that they also are alive.

But why try to prove you are alive, anyway? Let folks think you're dead, and they'll speak nicely of you.

A. P. Greenfelder, vice chairman of the Missouri Conservation Commission, and his brother Bernard Greenfelder accompanied Inspector Taubert to see the Casa Grande and the Superintendent during February.

Virginia Cotter had a pretty thorough-going introduction to the Southwestern Monuments. The gal proved that she can take it with the rest - even to making extemporaneous comments on what she thinks of all the guys with the stiff brimmed hats and the big ears.

The fur-lined bath tub goes this month to the two Californians who drove all night to see the sun shine through the sun hole. God bless 'em, they got King out of bed at a reasonable hour.

The Shollys also caught the worthy King with his p--ts down when they stopped by. George and Maurice were headed for Fresno on vacation.

*****SWNM*****

The
SUPPLEMENT
to the
Southwestern National Monuments
Monthly Report

INTERPRETATION AND PRESENTATION TECHNIQUES

For Presentation at the Southwestern National Monuments
Custodians' Meeting, February 19-21, 1941.

By Choster A. Thomas, Custodian
Bandelier National Monument, Santa Fe, New Mexico.

Glenn Frank has made the statement, "The future of America is in the hands of two men---the investigator and the interpreter. We shall never lack for the administrator; the third man needed to complete this trinity of social servants. The interpreter is the only man who can effectively play mediator between the specialist and the layman."

We custodians, rangers, ranger naturalists, set ourselves up as interpreters when we are contacting the public who come to visit our areas in the National Parks and Monuments. We stand between the layman (the average park visitor) whose knowledge of all things is indefinite and the investigator whose knowledge of one thing is authoritative. The investigator advances knowledge. We as interpreters advance progress.

We of the National Park Service have been entrusted with the superlative areas that portray the very heart of the scene that is America. To describe those areas superlatives must be used. We possess the deepest canyons, the greatest caverns, the biggest trees representing the largest and oldest of living things, the largest and most active geysers, unparalleled wilderness scenery, primeval forests, the historic battlefields and buildings, the remains of ancient culture that are the very shrines of our birth and growth. Needless to say, the stories that these areas and shrines have to tell is a superlative one. If we can intelligently interpret that story or our part of it that is the "Great American Scene," we can contribute our bit toward the understanding of man by man and toward tolerance of human beings toward their fellow citizens.

A dozen fields of thought are today congested with knowledge that the physical and social scientists have unearthed and the whole tone of and temper of American life can be lifted by putting this knowledge into circulation. With almost 17,000,000 people coming yearly under the spell of the unspoiled wilderness and the scenes of great drama of our advancing culture, we can exert a powerful influence for good upon our national life. That, I believe, is our highest calling. It must be our prime objective, especially in these days of hatreds and misunderstandings abroad and at home. I am convinced that as we have a superb story to tell, it is our duty to create in our visitors

an awareness of the "American Scene."

We, as interpreters, must have the willingness to think our way through the knowledge that the specialist and we ourselves have learned of our areas and translate it into the language of the street. Our field is a specialized one in a sense; special qualifications and abilities are required or they must be cultivated.

Former Director Horace Albright gives this as his definition of a Park interpreter. "The ranger answers all questions seriously. He must be a guide and interpreter of the mountains and their moods and mysteries. He must be a practical naturalist and a friend and counselor to visitors. He may be entertaining a reigning prince one day and fighting a forest fire the next. He must be tactful, courteous; ever patient."

The "Administrative Manual" of the National Park Service, which is really our Bible as far as policy and objectives are concerned, has this to say of our policy concerning interpretation. I quote from Chapter I, Section 3, Page Four.

"An interpretative program shall be developed to interpret the major features of each park area to the public, by means of field trips, lectures, exhibits, and literature so designed as to be understandable to the majority of the visitors; to emphasize encouragement to visitors to view and enjoy the object itself rather than to utilize prepared information; to utilize highly trained personnel with field experience able to interpret to the public the laws of the universe as exemplified in Service areas; and to conduct research programs which will furnish a continuous supply of dependable facts suitable for use in connection with the interpretative program."

That, I think, pretty well sums up the job that is laid out for us by the Service and may well serve as a challenge to our abilities to carry it out to its fullest conclusions.

We, (meaning the naturalist force and the Bandelier force) have tried to work out a well rounded interpretative program. We have not tried to give the visitor (as has sometimes been suggested) a liberal education in an hour or two or a comprehensive course in archeology of the Southwest, in our museum or trail talks. The program which follows certainly would not be the best program nor would it even be worth trying to copy at another monument. We are fortunate in having many facilities such as museum, lobby, overnight accommodations, etc., which have not been developed as yet at all monuments.

BANDELIER NATIONAL MONUMENT

INFORMATIONAL PROGRAM

Informational service is carefully planned to help each visitor to interpret and appreciate the features of Bandelier National Monument.

GUIDED RUINS TRIPS

Throughout the year, visitors are accompanied from the Museum Lobby to the various ruins by trained and competent ranger-archeologists. Parties leave the Museum Lobby on the hour each hour from 8:00 A.M. until 5:00 P.M. The loop trail is laid out to exhibit a complete

sample of the ruins of the Pajaritan Culture and takes about two hours. Because of the need of protecting the archaeological features, no one will be allowed to enter the ruins area unless accompanied by a ranger-archeologist.

THE MUSEUM

Our museum of modern and prehistoric Indians is entered from the Lobby. Cases are arranged to tell a logical story. They are numbered and proper sequence is obtained by KEEPING TO THE RIGHT as you go through. The first group of cases explains what is known of the prehistoric Indians of this area, and the second group tells you about the present day Indians of the Rio Grande Valley. The last six cases deal with the natural history features of Bandelier National Monument. A museum attendant is present to explain cases and answer questions.

CAMPFIRE LECTURES

Informal lectures are given in the museum lobby each evening at 8:00. The park archeologist or other members of the interpretational staff talk on the archeology and ethnology of the region.

CARAVAN TRIP

If a sufficient number of people register (minimum of 12) a caravan trip to the Otowi Section of the monument will be conducted at 2:00 P.M.

NATURE WALK

A hike to the beautiful "Falls of the Frigoles" may be taken at your leisure. Upon request of a group, a ranger-naturalist will conduct the trip which will take at least half a day.

TRAIL TRIPS

The Stone Lions and Painted Cave can be reached only by ten miles of trails across the canyons. For the more hardy visitor, a trip by horseback or on foot to this section is well worth while. If a sufficient group is interested, a guide will be furnished for this all day trip.

LIBRARY

A modest library of publications on the Southwest is available to those interested. No books may be loaned or taken from the library.

By working in the interpretative field for a number of years, I have picked up some little techniques which may be helpful to others. I do not claim any originality for these ideas myself. Some have been picked up from rangers at Mesa Verde and some from reading. I merely pass them on for what they are worth.

One of the most important ideas and one which I stress to my temporaries is that first, last, and all the time--we are interpreters when meeting the public. It may give us a little inflated sense of ego to be able to rattle off the scientific names of plants, trees, and formations. We may be tempted to try to impress people with our

knowledge and training by nonchalantly rambling along in highly technical terms or quoting eminent scientists as though they and we were boon companions. That smacks of trying to put out education. The laymen wants to know, but he immediately ducks when we try to hand him an education in a brightly wrapped package. There is little danger of talking too simply. I don't mean that should give the impression that we don't know anything about our monument, but we will soon discover how much we know about our monument without our making it too obvious. The well educated man can understand just as well if our thoughts are well organized. The less educated certainly cannot get what we are saying if we talk in terms over his head. Visitors, too, do not always like to be told everything. They are in a sense exploring the monument and they like to make discoveries. Don't be too pat in your explanations. If the visitor draws the wrong conclusions, don't tell him point blank that he is wrong. I've found it best to say something like this, "We don't quite think so here, you see, quite a study of the thing has been made and the specialists are more inclined to believe that thus and so is true."

Another factor which I have found to be invaluable is making people feel at ease while they are in the monument. For this reason the material for a trail talk should be so familiar that one can give his talk backward, forward or start in the middle and go either way without stuttering. I try to get my rangers to avoid set talks and to get over the idea that they have to get all the information at their command across to the visitor. I don't mean by this that our information should be disorganized; on the other hand, it should be so well organized that we can put it across at one point just as easily as at another. In other words, a good interpreter does not need to lean on high sounding terms or formal methods to put his thoughts across.

We have tried at Bandelier to work out little techniques that go to make our program run more smoothly. We have tried for two years to phrase a greeting for the man at the checking station and at the headquarters to use to break that awkward moment when the ranger appears on the scene. Best luck we've had is with this one.

"How do you do! I presume you've come to see Bandelier National Monument."

This one is a little obvious and not entirely satisfactory, but it's the best we've found.

We always try to accompany the salutation with a smile, although one ranger must have used a kind of "pompous grin." The dignified looking old gentleman remarked severely,

"What the Hell are you laughing at, young man?" These roads are no laughing matter. My wife was very frightened."

We tried one phrase for a while having to do with the drive out to the monument. The ranger approached the party with, "How do you do? How did you find the road coming out?", or some variation. Our road got so dusty and rough that that one was better never mentioned. It called forth a tirade about the condition of the road, etc., and "Why doesn't the Government do something---you know the rest-----."

We have found it best not to mention that trips leave on the hour from our lobby if it can be avoided. We try to get the visitor interested in the museum, in the lobby, in almost anything to make him forget that he isn't in a big hurry. We tried pictures some last summer. If a party arrived a half hour before the next trip, a ranger slipped into the back room and began projecting colored movies onto our translucent screen. Sometimes the party was taken into the museum immediately with, "Our exhibits tell an interesting story of Bandelier."

We have found that it is necessary to acquaint the visitor with the rules immediately upon starting on a field trip. If rules aren't mentioned, it is sure to happen that some members of the party haven't seen the signs or read their informational leaflets. It is quite embarrassing to have to pause in the middle of one's conversation and say, "Lady, you can't pick flowers. Throw it away!" The damage is already done and the lady is flustered and the attention of the crowd is distracted. Neither has it been found very effective to recite a list of rules on the beginning of a trip. We have found something like this to be effective.

"We're going to take a little walk up the canyon. Don't be afraid. There are no dangerous wild animals or snakes here and I'm not going to lecture to you all the way. Let's just visit our way along. I don't know your names, but if you want to ask a question, I'll answer to the name of Ranger or Guide or Hay or Mr. Thomas if you want to be very formal---I hope you won't be.

We all want to enjoy ourselves, but there have to be rules for every game so here they are. I'll have to slap the hands of anyone who picks a leaf or a flower or starts to put any walls or doorways or anything in the area in his pocket. Stay with the party as closely as possible and don't climb on the walls or up the cliff. You see, I want to get you all back safe and sound because the Government is very strict about taking \$5.00 off my pay for every one of you who falls off a cliff and get killed or who gets lost and we fail to find. By the way have all of you seen piñon nuts grow. The nuts or seeds are found in those cones you see on that scrubby looking pine---and so on and on."

Too facetious, you say! There is danger in that, but I've found that the visitor usually takes the wonders of nature and man so seriously that it is not good policy to joke about them. Your introduction is the place to get your crowd in good humor and I've found that this is a far more effective way to get the regulations across than simply to say, "There is a strict law against picking flowers. If you offend, you'll place yourself liable to a fine of not more than \$500.00 nor more than six months in jail or both such fine and imprisonment. It is also forbidden to take anything whatsoever from-----and so on."

This is, however, a good point to drop the facetious manner. If you encourage it any further, your crowd will get away from you and they can probably take up the rest of the trip with all sorts of wise cracks to the utter defeat of your aim to tell them your story and to the disgust of the members who want some real information.

I don't mean that every one of you should use or try to use any little devices--I can't use them continuously or they would become

tinny sounding. We also have repeat visitors, so I try to work up a number of them. I believe the devices are worth while and make your program run much more smoothly.

One of the worst features we have to fight is going stale on the trails. In most of the monuments the guiding is necessarily merry-go-round work. No matter how enthusiastic a ranger one has, 8 or 9 trips a day, six or seven days a week will do things to them. We have now a large enough force to break up the routine a bit. Last season we arranged a schedule of duties so that a ranger guided one day and did something else the next. For instance, we must always have one man on the checking station, another at Headquarters, and at least two guiding. This gave us enough diversity to shift men every day. No. 1 man might check cars Monday, guide Tuesday, take his day off Wednesday, guide Thursday, serve on checking station duty Friday, guide Saturday and take his turn at Headquarters on Sunday. During the heaviest part of the season last August we even broke up the days guiding by having everyone change schedule at noon. This gave each man his full day at guiding, but that day was broken by the overnight rest. I found that the effect was exceptionally good. The men themselves liked the variation; it cut down the little misunderstandings that arise between tired and harried men. Their guide time increased 35% over the year before. People bought more books from the Association, a pretty good indication that they enjoyed themselves and were really interested. True, the custodian had to take his place right along in the schedule and do his paper work at night, but it was worth it.

This system, of course, won't work where there is only one man to do all the guiding, but where there is more than one, I think it would be worth a try.

I feel that one of our duties and a great aid in putting across our story is to make people aware of their stake, so to speak, in the parks and monuments. We very often start our campfire lectures or trail talks with something like this, "We want you to get the feeling that as you are visiting these areas, they do not belong particularly to us rangers. We are simply placed here to help you to enjoy them. The parks are yours, and to you and to us goes the responsibility of preserving them so that the millions who come after us can enjoy them."

I believe that a valuable part of our interpretative program is choosing good books that help to interpret our areas and in making them available to the public. This can be done through the Association to its benefit. The benefits of the Association come back to our area to purchase more books for a free library. The story you tell on the trails or in the museum may fade rather rapidly after the visitor has left the monument, but if he can carry away a book he has bought as a souvenir, the information will be gone over time and again and your contact will be enlarged and lasting. Books, too, will contact friends back home and bring other interested visitors in the future.

Of course, we cannot be high-pressure salesmen and put the pressure on people to buy books. That would defeat its purpose and smack of the commercialism we must avoid in the monuments. I believe, however, we should display our books prominently, so that the knowledge that they

are available will be before every visitor.

The library and reading room is a valuable means of getting an enlarged story across to the public. A great many visitors come to see the ruins or features of the monument and go their way satisfied with a short stay. Many come, intending to go away hurriedly, but get interested enough to want to find out more and more about the area. These are valuable contacts, if they can be taken advantage of. Sometimes the interested visitor is a teacher in a school or college who may pass on the information to hundreds of others. Very often the bothersome old lady is president of her club in some distant city and will spread your story to great distances if she is handled properly. These are the people to invite to your library and point out books they can read, invite them to your study collections of bird skins, insects, type sherds, etc. This one contact may result in your story going to hundreds of persons.

I should certainly like to hear from others who have developed little techniques that make their programs run more smoothly and help to put across more fully the story that the parks have to tell.

****SWNM****

RESEARCH IN RELATION TO INTERPRETATION

By Matt M. Dodge

For Presentation at the Southwestern National Monuments
Custodians' Meeting, February 19-21, 1941.

The term "research" has for years been in disrepute in the Service and the desire of many naturalists to devote both personal and government time to carrying on research projects is the origin of some of the placards of impracticality with which the naturalists, as a group, have been frequently tagged. Since this urge to do research is not limited to Southwestern Monuments interpreters but is characteristic of naturalists and historians of nearly all areas, either the type of men which gravitate into this branch are impractical zealots (as seems to be generally believed) or else there must be something in the nature of the work required of interpreters which causes them, sooner or later, to become involved in some phase of scientific research.

The principal function of the Park Naturalist or Historian and his staff is to interpret accurately for visitors, in an interesting and understandable form, the numerous manifestations of nature and of man which occur in his area. To fulfill this function, the following steps are indicated; (1) a survey should be made to determine the

number and relative importance of the manifestations within the area; (2) accurate information must be obtained about all of these manifestations in order of importance as determined by public interest and other factors; (3) presentation techniques must be applied to insure understandability and interest appeal; and (4) a constant study of public reception of the interpretive program must be maintained, from the results of which study methods may be developed to improve the appeal and understandability of the presentation.

In the older Service areas, extensive surveys have been made and their scenic and scientific resources are well known. In many of the parks and monuments the manifestations of nature and of man brought to light by the surveys have been thoroughly studied. Nevertheless new resources are frequently being discovered and the visitor, impelled by curiosity or true interest, is continually asking new questions. Even in the most completely studied areas, interpreters are always being called upon to provide answers to questions upon which they have no information. The reply is standard, "I'm sorry, sir, I don't know, but I shall do my best to find out." In new and/or little studied areas, contact men are swamped with questions which they cannot answer, the embarrassment occasioned by what appears to be a lack of training together with their desire to provide satisfactory service spurring them to obtain the needed information as soon as possible. In the broad sense, ANY EFFORT TO OBTAIN THIS INFORMATION constitutes research.

Any attempt to clarify research in relation to interpretation and the serious problem which has resulted from a lack of understanding within the Service of its various implications requires, primarily, a clear definition of the term "research" together with an understanding of the use of the term in the program of the interpretive staff. It must be kept in mind, also, that in the Southwestern Monuments, field men are, almost without exception, engaged, during a large part of their time, in interpretive activities and are considered as members of the interpretive staff.

Funk and Wagnalls defines research as, "Continued and diligent investigation; studious and laborious inquiry; systematic scientific investigation." In discussing this problem at Headquarters we have broken this definition down and think of such "studious and laborious inquiry" as of two different types; (1), Primary Research which we think of as original and detailed "systematic scientific investigation"; and (2), Secondary Research which is "continued and diligent investigation" of everything available that has been written on the subject.

In the early days of the Service, its principal responsibility was one of PROTECTION to the resources of the areas under its care, but as more and more publicity was given the attractions of these areas, the public began clamoring at their gates in ever increasing numbers and DEVELOPMENT became imperative. At this time, in many of the parks and a few of the monuments, developments for the comfort and transportation of visitors have been completed, and the problem becomes one of enabling these visitors to best enjoy the areas by furnishing them INFORMATION about what to do and see, AND accurate INTERPRETATION

of the features in which they find special interest.

If, in planning the highway development of an area, careful surveys are necessary to determine routes, grades, curves, and similar engineering requirements, it is logical to assume that in planning an interpretational development, similar fact-finding preliminaries should be carried out. However, unlike engineering, interpretation is a relatively recent feature of development in recreational areas and public demand for information has expanded rapidly with little provision for obtaining the facts upon which to base the required information.

THE NATURALIST AND HISTORIAN THUS FIND THEMSELVES IN THE UNHAPPY POSITION OF BEING REQUIRED TO ORGANIZE AND DISPENSE INFORMATION WHICH THEY DO NOT POSSESS.

In the early days of the Service, before the presence of an interpretive problem was recognized, this situation was met through the facile imaginations of rangers and concessionaire employees. It is unnecessary to dwell upon the numerous weaknesses of this solution, nor to explain why the Service sought to meet the problem by setting up Park Naturalist positions and filling them with trained scientists. Unfortunately, several of these scientists, as soon as they realized the immediate need for basic facts, went to work on major primary research projects, either forgetting all about the demands of the public, or presenting their interpretive material in such a technical or uninteresting manner as to antagonize the visitors as well as other branches of the Service. The faint cloud of bad odor that still hangs over the terms "naturalist" and "research" originated with these early mistakes and because a number of these men were unqualified or poor in their professions.

There are still areas of the Service in which so little original work has been done that the interpretive program is extremely threadbare, and, as previously stated none of the areas have been so thoroughly studied that new discoveries and unanswerable questions do not arise from time to time.

Today, in general, the Interpretive Staff of the National Park Service is made up of men who know their business. By that I mean that they are fully cognizant of their duty to the public as interpreters, and at the same time they realize the imperative need for research (more pressing in some areas than in others) if they are to present complete and accurate interpretation. In addition, they are aware of the fact that, no matter how capable of original research they may be, or how pressing the need of research to solve some major problem of interpretation, that such research has not been generally found expedient or opportune, AS YET, as a function of the naturalist or historian and his staff because it interferes with his principal function of interpretation. This is one of the first and the most difficult facts that the new man, trained in some particular field of science, must learn when he enters the Service.

The situation resolves itself into this simple statement:
ACCURATE AND COMPLETE INTERPRETATION CANNOT BE DEVELOPED WITHOUT FACTS OBTAINED THROUGH RESEARCH, BUT MEMBERS OF THE INTERPRETIVE STAFF ARE NOT THEMSELVES AT LIBERTY TO CARRY ON PRIMARY RESEARCH PROJECTS.

That seems like a very simple statement to have taken such a long time for me to develop. However, there are no doubt several of you men here who have never understood why naturalists feel the need to do research, and others of you who have never understood why the naturalist didn't get busy and dig up some important facts that you needed badly in putting across your monument's story. Because a failure to understand the basis of that simple statement has caused and still is causing no little friction among the personnel of the Southwestern National Monuments, I have purposely taken considerable time in attempting to clarify the situation.

I have already told you that here, at Headquarters, we think of two different types of research; primary and secondary. We also think of research from another angle and from this viewpoint break it down into two types; Research for Science and Research for Interpretation. Combining the two, we can have primary research for science and primary research for interpretation; and we can have secondary research for science and secondary research for interpretation.

Although the National Park Service, theoretically, likes to have its men attain the prestige of having accomplished a major project of primary research, experience has shown that such projects seriously interfere with his necessary duties unless they are accomplished on the man's personal time and are fundamentally projects of research for interpretation. In other words, the Service frowns upon its men spending any time on research solely for the sake of science. Primary research for interpretation is permissible provided a man carries on the project on his own time and does not use for this purpose government time which should be spent in performing his interpretive duties. Secondary research, when necessary for interpretation, is permissible on government time, in fact it is encouraged. In general that means that if someone asks you a question that you cannot answer and you feel fairly sure that it is answered in some book, you should do your best to hunt it up so that you can answer it the next time it is asked.

Now, here is the difficult one; where do we draw the line between "research for science" and "research for interpretation?" Disagreement over the position of that line probably causes more trouble than any other feature of the problem of research in relation to interpretation. perhaps the following definition will show the difficulties involved: THE DIFFERENCE BETWEEN RESEARCH FOR INTERPRETATION AND RESEARCH FOR SCIENCE RESTS UPON WHETHER THE RESEARCH IS DONE TO ANSWER QUESTIONS ALREADY ASKED OR TO ANSWER A QUESTION THAT IS ANTICIPATED OR MIGHT BE ASKED.

Practically, any interpreter who honestly attempts to analyze a proposed research project can easily determine whether it is badly needed in order to supply required information, or whether it appeals simply as an interesting project to tackle. It is probably true that some of the antagonism toward primary research has been brought about through the activities of an overenthusiastic naturalist who made use of government time in conducting a primary research project whose findings did not forward the interpretive program. Bird banding is a case in point. As long as bird banding serves the important

purpose of familiarizing personnel with the identity and habits of local birds thus enabling them to correctly answer visitors' questions, bird banding is research for interpretation. When it goes beyond that stage and its findings are not directly applicable in the interpretive program, it becomes research for science. At the point where it crosses the line it must either be dropped or put entirely on a personal time basis.

This brings us to the heart of this discussion; how are we going to accomplish primary research so badly needed for interpretation?

This problem was discussed at considerable length at the Park Naturalists' Conference at Grande Canyon in November, and here in the Southwestern National Monuments we have phases of the same problem which we have been trying to solve for a long time. There are four channels through which we can accomplish this much needed research, and I shall discuss them at some length. Any further practical suggestions along this line which will help us to obtain accurate information about the features of our monuments so that we may put a little more meat on the bones of our interpretative skeleton, will be greatly appreciated.

In the past the source of almost all of our accurate information has been the reports of primary research projects conducted by scientific or educational institutions. Such organizations as the Smithsonian Institution, the National Geographic Society, the American Museum of Natural History, the Museum of Northern Arizona, the Desert Laboratory of Tucson, the San Diego Natural History Society, and others have built the framework from which our interpretational program hangs. Knowing this, we should do everything within our power to encourage such reputable organizations to undertake additional research projects within our areas. Such organizations are equipped, financed, and staffed to carry on the most exhaustive type of scientific research, and from the results of their work we are assured accurate, dependable, and complete basic data; in fact sometimes too broad in scope but not sufficiently detailed in certain aspects which are needed in interpreting factors local to the monument.

With the regionalization of the Service and the setting up on various technical positions, our prospects for obtaining small but definite research projects have become much brighter. These capable technicians, specialists in their various fields, are available for our use in working out definite problems. If faced with a puzzling question frequently asked by visitors, or if blocked in the preparation of an exhibit plan by lack of specific information on a definite point, the interpreter may request that the regional technician shall make an investigation. During the past three years, regional technicians have been of great value to us in working out definite details required in various phases of our interpretational work. In a similar manner, staff members of the Western Museum Laboratories are available for occasional projects of secondary research. With the numerous facilities of the University of California Library, Laboratories personnel have, on several occasions, been able to run down in the library elusive facts which were badly needed in planning exhibits or in con-

pleting other interpretive devices.

Under the present set-up, the aforementioned cooperating scientific organizations together with regional technicians and museum laboratories personnel constitute our principal sources of information derived from research. In addition, over a considerable period of time, Headquarters interpreters and field men can add much to their knowledge of the areas through their own activities. Many of you men and a number of SWNM wives are trained and capable of carrying on primary research. Where this training is combined with a special interest, the solution of certain monument problems through research projects carried on as a hobby on personal time becomes a valuable contribution to the fund of knowledge needed in interpretation of the area. At the present time field men and their wives are conducting projects of herbarium specimen collecting, bird banding, photography, and similar projects. Monuments which have seasonal rangers assigned to them each year are often fortunate in obtaining trained botanists, archeologists, historians, etc., who derive considerable pleasure from conducting research projects in their spare time. In many of the national parks, over a period of years, seasonal men have completed extensive hobby research projects, the information derived from which has greatly advanced the interpretive program. The fine herbarium collection and check list of plants at Chiricahua is an imposing monument to the zeal and untiring effort of seasonal Ranger Ora H. Clark. Field men and Headquarters interpreters should increase their efforts to obtain seasonal rangers who will, through their own interests, undertake hobby research projects definitely aimed at providing accurate information for the interpretive program.

At this point, it seems wise to inject a word of warning. Scientific research requires a knowledge of proven techniques in both the securing and recording of information. Assurance of accurate findings, and interpretation can be based only upon proven facts. Only personnel, either permanent or seasonal, who are thoroughly trained and capable of conducting research, should be permitted to undertake hobby research projects. It is for safeguarding accuracy that Headquarters has issued such detailed instructions for collecting plant specimens and requires that all specimens be identified by established botanical authorities. For the same reason, only qualified persons are permitted by the Fish and Wildlife Service to carry on bird banding. Field men must limit their hobby research projects to fields in which they are thoroughly qualified, or else they must take a thorough course of training in the field in which they desire to work. Badly as research work is needed in all of our areas, our interpretive program is far better off to cripple along without it than to include statements which are erroneous due to incomplete or inaccurate research.

Finally, it is possible for interested field men to accumulate a great deal of valuable interpretive information as a side line or incidental to their regular duties. During the year, field men are required to keep records of their field observations on wildlife as a basis for the computation of the annual wildlife census report submitted by the Washington Office each October. Through the recording of such

observations on observation record cards provided by Headquarters, a great deal of valuable information is acquired during a period of years. The field man who keeps his eyes open when on patrol, who writes down accurately and completely the observations he makes, and keeps this record up-to-date, will be surprised to find how soon he has acquired an important reference record not only invaluable to him in answering visitor questions accurately, but one which will assume unbelievable importance when he is faced with the preparation of an exhibit plan or is called upon to write an interpretive paper.

During the past few years, projects of ruins stabilization have been extremely important in providing added information for the interpretive program. At Montezuma Castle, Tuzigoot, Tumacacori, Chaco Canyon, Tonto, Aztec Ruins, and Navajo, ruins stabilization projects have provided not only information but valuable exhibits-in-place which have contributed greatly to the completeness and interest of the interpretive programs of those areas more, of course, at some than at others.

There is one other source through which research for interpretation may be obtained. I hesitate to mention this because it is so rarely available, yet it may be of such great importance that it cannot be overlooked. However, it should be considered under the heading of "research by scientific institutions." What I have reference to is the rare occurrence of a gift of a sum of money by some interested private citizen for the purpose of financing a specific project of research for interpretation.

There is one other phase of this problem which should be discussed and which I mentioned at the beginning of this paper. That is the necessity of maintaining a continuous project of studying and analyzing the reaction of the public to our interpretive work. This must be done by the field men with the occasional assistance of a member of the Headquarters interpretive staff whenever he can get to the monument. If our interpretive program is to grow in ever increasing value to the public, we must be forever on the lookout for weaknesses in it as well as for means by which it may be improved. Such study is actually a project of primary research, but it is so closely allied with our daily work of contacting visitors that it may be included under the heading of sideline research incidental to our work. As a result of this type of study, several field men have already altered details of their interpretive devices. At the present time one complete case is being changed over here at Casa Grande because the custodian discovered a weakness. We hope that the change will be a marked improvement, in which event similar changes will be suggested for like cases in other monuments.

In concluding this discussion on the relationship of research to interpretation, I shall simply sum up the points which I have covered in an effort to leave you with a clear idea of the present status of this problem. The basic facts upon which our interpretive programs are built must be derived from research carried on in our areas. During the days when Service areas were being developed, visitor questions were turned aside with wise cracks or answers based upon the

imagination. This was resented by the public and resulted in the appointment of scientists as park naturalists. Realizing the need for research to obtain basic information, some of these scientists neglected the public to carry on such research, results from which were not always satisfactory, thereby antagonizing both the public and other branches of the Service. Experience with primary research by interpretive personnel on government time indicates that it is not generally practical because it interferes with the interpretive program, but that each case must be considered on its own merits. New personnel, realizing the need for research to obtain information for interpretation, often have difficulty in understanding why the Service is opposed to research on the part of its interpretive staff. Care is taken to to inform all prospective personnel on this matter before they are permitted to enter the Service. This applies both to permanent and seasonal positions.

Because research is essential to accurate and well rounded interpretation, and because Service interpretive personnel cannot undertake research projects on government time because of their many other duties; if done at all research must be carried on by other agencies. Primary research in our areas by competent scientific organizations should be stimulated and encouraged. Occasionally private citizens may volunteer contributions to finance such projects. Small detailed research projects may be carried through by regional technicians when completion of exhibit plans or other interpretive devices depend upon it. The Western Museum Laboratories may be able to aid in secondary research projects.

Interpretive personnel and their families who are qualified by training and who are interested in research projects as a hobby are encouraged to carry on this work as recreation to their personal time. Observation records and other data may be accumulated as a sideline or incidental to every day duties. Over a long period of time, these records form a valuable base upon which certain phases of interpretation may be built. Ruins stabilization, accumulation of data for the annual wildlife census report, and the reaction of the public to various phases of the interpretive program provide material for study in the everyday course of duty. Careful study of the latter provides the most accurate basis for improving the interpretive program in your area. At the present time primary research for interpretation by qualified Service personnel on government time is approved when the interpretational content is incomplete, when the protective, administrative, and contact duties of the personnel will not be adversely affected, when it is not possible to secure the services of approved outside agencies or technicians, and when sufficient time is available to carry the project through to completion.

*****SWR*****

SOUTHWESTERN MONUMENTS

MONTHLY REPORT



MARCH 1941

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

SOUTHWESTERN NATIONAL MONUMENTS

MARCH, 1941, REPORT INDEX

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HEADQUARTERS

SOUTHWESTERN NATIONAL MONUMENTS
NATIONAL PARK SERVICE

COOLIDGE, ARIZONA

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HUGH M. MILLER, SUPERINTENDENT

<u>FIELD STATION</u>	<u>POST OFFICE</u>	<u>CUSTODIANS</u>	<u>1940 VISITORS</u>	<u>ACRES IN AREA</u>
1. ARCHES	Moab, Utah	Henry G. Schmidt	2,518	33,680.00
2. AZTEC RUINS	Aztec, New Mex.	Thomas C. Miller	10,550	25.88
3. BANDELIER	Santa Fe, N.M.	Chester A. Thomas	13,689	26,026.20
4. CANYON DE CHELLY	Chin Lee, Ariz	Charles D. Wyatt	2,733	83,840.00
5. CAPULIN MOUNTAIN	Capulin, N.M.	Homer J. Farr	35,100	680.42
6. CASA GRANDE	Coolidge, Ariz.	Albert T. Bicknell	12,877	472.50
7. CHACO CANYON	Chaco Canyon, NM	Lewis T. McKinney	2,245	21,509.40
8. CHIRICAHUA	Dos Cabezos, Ariz	Frank L. Fish	10,120	10,694.80
9. EL MORRO	Ramah, N. Mex.	Robert R. Budlong	1,593	240.00
10. GILA CLIFF DWEL	New Mexico	No Custodian	80	160.00
11. GRAN QUIVIRA	Gran Quivira, NM	Joe H. Toulouse	2,494	610.94
12. HOVENWEEP	Cortez, Colo.	No Custodian	352	285.80
13. MONTEZUMA CASTLE	Camp Verde, Ariz	Earl Jackson	8,078	521.41
14. NATURAL BRIDGES	Blanding, Utah	Zeke Johnson	901	2,740.00
15. NAVAJO	Tonalea, Ariz.	James W. Brewer	513	360.00
16. ORGAN PIPE CAC.	Ajo, Arizona	William Supernaugh	9,775	330,687.00
17. PIPE SPRING	Moccasin, Ariz.	Leonard Heaton, Act.	1,141	40.00
18. RAINBOW BRIDGE	Tonalea, Ariz.	No Custodian	215	160.00
19. SAGUARO	Tucson, Ariz.	Don W. Eggermayer	16,892	63,284.00
20. SUNSET CRATER	Flagstaff, Ariz.	D. Jones, in chg.	11,888	3,040.00
21. TONTO	Roosevelt, Ariz	John Peavy	5,240	1,120.00
22. TUMACACORI	Nogales, Ariz.	Louis Caywood	7,287	10.00
23. TUZIGOOT	Clarkdale, Ariz	Jack Cotter	6,125	42.61
24. WALNUT CANYON	Flagstaff, Ariz	Paul Beaubien	12,258	1,873.10
25. WHITE SANDS	Alamogordo, N.M.	John Will Faris	54,498	143,227.47
26. WUPATKI	Flagstaff, Ariz	David J. Jones	3,326	35,865.30
27. YUCCA HOUSE	Cortez, Colo.	No Custodian	136	10.00
TOTALS			232,624	761,206.89

AREA, END TRAVEL YEAR 1940: 1,189.395 Sq. Miles

OPENING

By Hugh M. Miller, Superintendent

The desert has been incredibly beautiful throughout the past month. This is true throughout southern Arizona, but particularly true at Organ Pipe Cactus National Monument, where literally thousands of acres are covered with desert mallow, poppies, and owl's clover in brilliant patterns of orange, yellow, and purple. Dozens of other varieties of wild flowers are in bloom. A single mallow blossom or a single desert poppy, presents exquisite perfection of color and form. Comprehending the myriads of such individual blossoms which make up the masses of color, you would, I know, be moved to ask, "If this be desert, what is heaven like?"

You will forgive the effusion, I trust. The desert in bloom as it is blooming this year, is an esthetic experience of a life-time.

The first half of the month was devoted to preparation of preliminary estimates for fiscal year 1943. A dry business, but indispensable. Many needed items were omitted and yet the total increase requested seemed large. We would defend the increases actually presented, before Saint Peter at heaven's gate, were we called upon to do so.

One trip to Arches National Monument with the Assistant Superintendent to inspect the Arches CCC camp, and one trip to Organ Pipe Cactus National Monument with Attorney Johnson of the Water Rights section, represented all field work performed during the month. CCC at Bandelier, Mount Eldon, and Chaco Canyon was badly handicapped by unfavorable weather conditions.

The first test hole for water drilled at Organ Pipe, with funds provided under a special allotment, was dry. The rig is working at a new location five miles north of the International Boundary, and near the main highway. Bill Supernaugh's optimism with respect to this hole is high. I do not expect water to gush forth as it did when Moses smote the rock. Bill is a fine boy, but no Moses, and I shall be delighted if we find 20 gallons of water a minute at the bottom of the hole.

The survey of the water supply situation with Attorney Johnson was regarded as important. Should it be possible to acquire certain privately held wells, anxiety with respect to that phase of monument development will be allayed. Water is a scarce and valuable commodity on the desert. It is prudent to acquire whatever sources of supply may be available.

Spring cleanup is under way at most of the monuments. The past winter was the most severe in my memory from the standpoint of damage to roads, trails, and prehistoric structures.

Financially, the monuments are practically broke. We are feeling the pinch by now of a loss of some three thousand dollars suffered at the beginning of the fiscal year. Unless some relief can be accorded through release of reserve funds, we will be on practically a gasoline and oil basis in May and June; but will hold intact all established positions, both permanent and seasonal.

Unexpected termination of the Bandelier CCC Camp on June 30 will push us badly. The camp was programmed to September 30.

In spite of the many storms and resulting impassable approach roads to several of the monuments, travel for March held approximately to the same figure recorded for the same period last year. Thus the lead of more than 5000 people for the travel year to date is still held. There is no reason for apprehension that this lead will not be retained, with some indication that it may be increased during the remainder of this travel year.

SWM

CONDENSED REPORT

GIVING HIGHLIGHTS OF THE MONTH

Coolidge, Arizona
April 1, 1941

The Director
National Park Service
Washington, D. C.

Dear Mr. Director :

The Condensed Report for the month of March, 1941, follows:

000 GENERAL

<u>010 Travel</u>	<u>MAR</u>	<u>TRAVEL YR</u>	<u>MAR 1940</u>	<u>TRAVEL YR 1940</u>
Arches	197	901	99	819
Capulin	400	6050	800	7500
Chiricahua	786	3422	534	2640
Natural Bridges	0*	0*	0	92
Organ Pipe	1500	5980	900	5635
Rainbow Bridge	0*	0*	0	20
Saguaro	1937	8850	2882	11237
Sunset Crater	268*	1660*	708	2108
White Sands	3607	17823	2918	12021
TOTAL, Geol.-Biol.	8695	44686	8841	42108
Aztec Ruins	222	1861	310	2017
Bandelier	159	1359	397	1889
Canyon de Chelly	12	369	137	656
Casa Grande	2739	11166	1917	7732
Chaco	8	193	38	582
El Morro	0	171	27	301
Gila Cliff Dwellings	0*	10*	0*	10*
Gran Quivira	72	709	152	856
Hovenweep	0*	43*	0*	10*
Montezuma Castle	600	2502	662	2487
Navajo	---	42	24	99
Pipe Spring	43	380	51	192
Tonto	1121	3637	879	3362
Tumacacori	1210	5008	1145	4839
Tuzigoot	654	3285	679	2400
Walnut Canyon	366	1993	709	2736
Wupatki	113	894	176	928
Yucca House	0*	27*	5*	26*
TOTAL Hist. Sites	7319	33644	7303	31116
GRAND TOTAL FOR MARCH	16014	78330	16149	73224
Last Month	13867	62521		

*Travel estimated

020 General Weather

One of the wettest winters recorded in the southwest came to an end during March but indications point to continued wet weather during the spring. Precipitation records were broken at a number of the cooperative weather stations located on the monument and many old-timers report remembering one or two seasons of similar heavy precipitation (p. 139).

100 ADMINISTRATIVE

110 Special Activities of the Superintendent are outlined in the "OPENING" on page 127 of this report.

120 Monument Inspections

Arches - H. Miller, R. Higgins, and Glen Boyland.

Aztec Ruins - William Stephenson, Ida Christianson, and J. Ramsey.

Casa Grande - G. Sholley, J. Kieley, and A. Jenkinson.

Chaco Canyon - Engineers Preece, Maxwell, Diehl, and Forester Balch.

Montezuma Castle - G. Stonehocker, E. Preece, J. Diehl, R. Maxwell, P. Balch, A. E. Underhill, Tex Worley, and J. Cotter.

Organ Pipe Cactus - J. Kieley, W. B. McDougall, C. Richey, J. Miller, Dr. L. Gill, J. Golden, N. Dodge, P. Soule, J. Brewer.

Headquarters - F. Kittredge, Tex Worley, J. LaVergne, and W. B. McDougall.

Saguaro - Dr. L. Gill, A. Daniels, E. McPhaul, H. Flickinger, G. Sholly, and J. Golden.

Walnut Canyon - Superintendent Whitcraft, Rangers Worley and Miller, and J. W. Noffinger.

Tumacacori - J. Miller, C. Krueger, C. Taubert, R. Starrett, and Geo. Scholly.

White Sands - Paul Franke, W. B. McDougall, G. Stonehocker, and Tex Worley.

Wupatki - Kenneth Saunders.

160 Publicity

Chaco Canyon - Fall of Threatening Rock brought much publicity to this monument (p.134).

Headquarters - Two-fold leaflets and sixteen page informational bulletins copy prepared (p. 467).

White Sands - Usual long list of publications carried White Sands stories (p.141).

Headquarters - Arrangements made with Arizona Highways magazine to publish article on each national monument in Arizona (p.167).

170 Complaints

Saguaro - Confusing approach signing caused grumbling. (p. 149).

200 MAINTENANCE, NEW CONSTRUCTION, AND IMPROVEMENTS

210 Unusual Maintenance

Aztec Ruins - Water pump and septic tank repaired. (p. 152).

Canyon de Chelly - Part of residence and office painted inside. Sewer repairs made. (p. 150).

Chaco Canyon - Appropriations made for Threatening Rock cleanup (p.136). Much work done attempting to keep approach road passable, and trails

CONDENSED REPORT (Continued)

around residence areas usable (p.134).

Pipe Springs - Report of research work on page 140.

Wupatki - Pump repaired and pipe line laid for watering Navajo sheep (p.147).

220 New Construction

Montezuma Castle - Entrance road gutter project 90 per cent complete (p.157).

Organ Pipe Cactus - Another well hole proved dry (p.137).

230 Special Improvements-CCC

Chaco Canyon - Eight thousand foot truck trail pioneered, and work progressing on Headquarters road (p.135).

Walnut Canyon - Custodian's residence practically completed (p.165).

Wupatki - Basement excavations finished (p.165).

240 Improvement to Approaches

Arches - Entrance road greatly improved (p.161).

Montezuma Castle - Work on approach rendered it dangerous (p.157).

Pipe Springs - CCC and Indian Service improving approach (p.146).

300 ACTIVITIES AND OTHER AGENCIES

310 Utility Operators

Chiricahua - Operator having one of best years on record (p.142).

White Sands - Concession moved into Headquarters building workroom (p.141).

320 Cooperating Government Agencies

Casa Grande - Dike and contour projects started under Soil and Moisture (p.140).

Chaco Canyon - Contract made for Soil and Moisture program to start soon (p.133).

Organ Pipe Cactus - White-wing dove observations for Fish and Wild Life Service continued (p.138).

Saguaro - Bureau of plant industry continuing cooperative studies on disease of giant cactus (p.149).

330 Cooperating non Government Agencies

Arches - Moab garage rented space for office (p.163).

Saguaro - U. of A. Continued studies on saguaro necrosis (p.149).

350 Donations and Accessions

Gran Quivira - New and repaired publications received (p.144).

Organ Pipe Cactus - 243 plant specimens received to start herbarium (p.13).

Saguaro - Fire-fighting equipment and six publications received (p.143).

Tumacacori - Cactus specimens donated to patio garden. Several books received (p.155).

400 INTERPRETATION

Canyon de Chelly - Plans for multiplex display submitted (p.150).

Wupatki - Interpretive program plan submitted (p.147).

CONDENSED REPORT (Continued)

410 Lecture and Guide Service

Casa Grande - Plans for reptile case finished (p.170).

Headquarters - In six extension talks, 663 people contacted (p.167).

Saguaro - Auto caravan conducted (p.148).

All Areas - Programs provided for service clubs at Mesa Arizona (p.140) Flagstaff, Arizona (p.147), Socorro, New Mex., (p.144), and Schools at Camp Verde, Arizona (p.157).

420 Museum Activities

Bandelier - Progress made in completing displays (p.164).

Chiricahua - Relief model received (p.143). Plans for wall case at orientation station finished (p.167).

Tuzigoot - New system of instruction by games tried with 4th graders and found successful (p.136).

430 Research and Observation

431 Botany

Casa Grande - F. Elmore making herbarium collections (p.139).

Montezuma Castle - Ethnobotany records worked up (p.157).

Organ Pipe Cactus - Dr. McDougall making studies (p.137).

Tonto - H. C. W. P. continuing herbarium collections (p.154).

432 Zoology

Gran Quivira - State game warden stocked monument with quail (p.144).

Organ Pipe Cactus - Antelope and Big Horn seem to be on increase (p.138).

433 Geology

Petrified Forest - Reconnaissance in northern Arizona reported (p.177).

434 Archeology

Tonto - Work continued on artifacts at headquarters (p.168).

Tuzigoot - Child burial found and prepared as displays in place (p.167).

Walnut Canyon - Sherds studied and vessels patched (p.165).

Wupatki - Plans for proposed excavations progressed (p.147).

435 History

Pipe Springs - Report begins on page 180 regarding necessary research.

500 USE OF MONUMENT FACILITIES BY PUBLIC

510 Increase or Decrease of Travel

All Areas - Considerable increase of travel over last month but a very slight decrease from the Totals for March 1940 is recorded on the travel chart on page 129.

Casa Grande - Travel drop blamed to continued wet weather (p.139).

520 Newsworthy Visitors

Arches - E. P. Hunt and Elwyn Bugge (p.162).

Headquarters - Ruth and Millard Henning, A. Nichol, and Rev. Stoner (p.169).

Montezuma Castle - H. Fonda, movie star (p.156).

Saguaro - Dr. Halladay and Dr. A. Anderson (p.149).

Tumacacori - Dr. Halladay and A.E. Buchenberg (p.155).

White Sands - Dr. Stein and Marshal Benedict (p.141).

600 PROTECTION

640 Fire Protection

Saguaro - Fire suppression work carried out (p.149).

650 Ruins Stabilization

Chaco Canyon - Weather very hard on ruins (p.133). Costs of ruins stabilization discussed thoroughly on page 173. Drainage only active job possible (p.161) Tonto - Necessary to protect ruin from rain entering cave (p.153).

FIELD REPORTS

FROM THE MEN ON THE JOB

CHACO CANYON

By Lewis T. McKinney, Custodian
Chaco Canyon, New Mexico

Visitors this month, 8; travel year to date, 193.

General: Well, she continues to rain out here in "GOD'S COUNTRY" and we are all still having a slopping good time. The CCC camp has been doing some work this month, but the roads are still almost impassable. At this time, the Camp has three trucks stuck out on the approach roads, and maybe one pick-up. Lamborn left here at two P.M., when Mr. Balch came through. Mr. Hayes left here yesterday morning to finish setting the road signs between here and Aztec, was caught in a hard rain and spent the night at the CCC camp at Bloomfield. He will be lucky if he gets back today. Mr. Gilliland, Hayes and Rush left here last Saturday, spent the night in Kinbetoh flat, 12 mi. north of here and got back to camp Sunday morning about nine. They just postponed their lunch and dinner, Saturday so they could enjoy a late breakfast Sunday. Gilliland started to Farmington yesterday afternoon for some supplies, but his truck is still resting out about nine miles. I brought him into camp about seven last evening, after I had waded about three miles to get five boys I had working on the north approach road. We had to leave the truck the boys were using, about twelve miles out. Mr. Gilliland is on his way out after them now.

Service Visitors: Engineers Preece, Maxwell, Diehl, and Balch slipped into the canyon for a brief stay this month, to plan work under the Soil and Moisture set-up. All of them but Mr. Preece seemed to be in a great hurry to get out, but Mr. Preece had to wait until the sun came out so he could get a few photographic shots.

Stabilization: The Mobile Unit continues to carry on with the stabilization of various ruins. The word from your office yesterday, concerning the money set-up for repairing the damage done by the falling of THREATENING ROCK was certainly welcome. However it will take some pretty close planning to get by on this amount. Most all of the excavated ruins have certainly been badly damaged by the wet winter that they have gone through. It makes me sick, away down deep, to look at Chetro Kettle, and the other ruins that are exposed to the weather.

Maintenance: I have spent the last ten days trying to make the approach

CHACO CANYON (Continued)

roads passable. But just about the time we got them bladed and passable, here comes another rain and our work is to be done over. Gravel has been hauled and placed on the trail between the residence, museum and office. Dirt has been hauled and filled in around the residence so we can get outside without wading in water up to our shoetops. Also to prevent water from softening the ground under the foundation of the residence. Four salt bushes have been transplanted near the light plant shelter, so as to hide it. The kitchen cabinet has been repaired, where the mud and water has been running through into Carolle's pots, pans and beans.

Routine and Continuing Projects: Horesback patrol has been carried on through the month, by the enrollee and myself. Some fence repair has been done, but the water-gaps cannot be replaced until the Chaco Wash quits running. We plan to try out electric fences on these water-gaps, and I am wondering if any of you custodians have had any experience with them in a similar place as the Chaco Wash. If you have, please let me hear from you. Radio contact with El Morro National Monument has been carried on throughout the month, but Bud's receiver has a tube blown, and he must use his personal receiver in order to make a contact. I have contacted The Grazing Service CCC camp at Bloomfield a few times on test calls, but I have to use my personal radio in order to hear them as the Park Service receiver will not pick them up. They operate on 2264 and this little set will not reach them.

I have been trying to secure a well rig for drilling a well, but to date no luck. We hope to get artesian water at about 1100 feet. But if this wet weather continues, I believe we can walk out to the edge of the cliff when we get the new Headquarters on top, and just dip up water. Each rain the water in the wash gets a little higher.

Equipment: My pickup and dump truck were not in too good condition last fall and driving them for three months in low, second, and reverse gears didn't help them any. The old light plant is still running, with a minimum of repairs, but I can hear a few little mechanics hammering inside. The water pump is still hitting pretty well, at the well. But the motor is pretty badly worn and I doubt if it will last through the summer.

Signs: We hope to finish setting the road markers on the north approach road today. All are set on the south road. We still have the five combination signs for Chaco, Aztec, El Morro, and De Chelly to make. I have been unable to get out and secure the exact mileages for these signs. The entrance signs are set up, but the masonry work at the bottoms are not complete. This should be completed by the middle of next week.

Publicity: We seemed to have received a lot of publicity since "THREATENING ROCK" fell, and I expect several visitors this year that has been here in the past, just to look at the little "THREATENING ROCKS". I believe it will be a lot better to leave the rocks where they fell, but I sure need a trail built up over them as the visitors like to climb over them and if they do without a trail, some one will get injured sooner or later.

Miscellaneous: Mrs Vivian has returned to the Canyon after several weeks in Albuquerque with two sick children. Perry Stigler was married to Sue Kenny of Albuquerque, several days ago. All the proof we have is the cigars and what we read in the paper. Mrs. Stigler is still in Albuquerque, teaching school. Perry is Educational Adviser here at the CCC camp. Dorothy Phelps was married to C. J. Burnham, a neighbor Indian Trader, last month and they are making their home at the Blanco Trading post on Highway 55, at the intersection of the Chaco approach road. Carolie is Acting Postmaster since Dorothy left and the parrot and I get our meals when Carolie gets around to feeding us.

SWNM

CHACO CANYON CCC

By Herman C. Phelps, Proj. Supt.,
Chaco Canyon, New Mexico

To date we have lost only three days this month due to bad weather. The roads are all open again, but I'm afraid they won't be long; it looks like rain.

Work is progressing very nicely on the Headquarters Road, approximately 8,000 feet have been pioneered through for a truck trail, but from now on work will slow down considerably as there is much rock to go through. James Gilliland is about to pull out what's left of his hair trying to figure a way to keep from throwing rocks all over the canyon, but after getting his advancement to Foreman this month, I think he will make out OK.

Claire Mueller has moved his crew of stone cutters up on the Headquarters Road to quarry some of the loose rocks for headwalls on Section C., but will lose most of his good stone masons at the end of this month.

Oscar Hayes has completed most all the signs, and will finish setting them today. Mr. Hayes has resigned from the Park Service, effective the end of this month. This camp is losing a good carpenter, we're going to miss Oscar and his pinyons.

David Christie is up and around again, after that spell of sickness. David is like a little boy at Xmas time with all those new trucks. He's kinda lonesome without all those piles of junk.

Lamborn is running a crew on Section C., giving it the finishing touches.

The Soil and Moisture program will start within the next day or two.

Mr. Procco, Mr. Eichl, Mr. Balch, and Mr. Maxwell spent two days with us the first part of the month, looking over the Monument and planning the

Soil and Moisture Program. (Got some new jokes)

During March work was done on the following projects: Guide and Contact, General Cleanup, Boundary Fence, Maintaining Roads, Maps & Models, Rock Quarry, Entrance Road Section C., Headquarters Road, and Signs.

~~SWNM~~

TUZIGOOT

By Jack Cotter, Custodian
Clarkdale, Arizona

Visitors this month, 654; travel year to date, 3285.

Visitors: 654 this month. This is 162 more than last month, and a reminder that the travel season is just around the corner. Two fourth grade classes from Clarkdale were included in the special contacts. Topic of interest was pueblo life as it was lived back when Tuzigoot was occupied. With this end in view, special games were tried out, the most popular of which was for each kid to take a 10-second look at an exhibit or room. When all had taken their "look", all had a chance to tell what they saw. Of course, all together, they had spotted practically everything. Then the group was allowed to go back so each could see what he had missed. A little practice at this, and the kids became quite shrewd at sizing up exhibits, and took great pride in being able to tell what they could remember seeing. Lately, groups of children have taken to trekking out from town on their own, intent on "doing Tuzigoot". Included were a squad of girl scouts and bunches of the same indefatigable fourth graders.

Stabilization: Work at the ruins this month consisted of simple maintenance here and there, all of the major jobs having been completed. The boys have now developed considerable ingenuity in matching the old adobe with the adobe-and-waterproof cement mix (proportions 1-10 or less, depending upon the strength desired). One of the best tricks recently developed is to throw mud or dust on the outside surface of the wet adobe, which dries with a very natural appearance. After the adobe has completely dried, the veneer takes long enough to wear off that the adobe itself has a chance to lose its fresh look.

Children's Hour: Tuzigoot is now threatening to take on the aspect of a well-stocked prehistoric orphanage. With the aid of the NYA, the custodian completed work on the exhibition, in situ, of a child burial at the foot of the west wall of Unit III, Room 9. This burial, that of a three or four-year old was first noted several months ago when a small section of wall gave way to reveal part of the burial immediately beneath and parallel to, the masonry. The burial was left excavated on a low pedestal so that the ground could dry out. Later, the fallen wall was set back in place, and the burial was left intact beneath a large plate glass

case top. (Finally, a use appears for case tops that have the corners knocked off.) Finishing and protecting the set is a trap door surfaced with adobe that can be swung on hinges so as to cover the burial completely when it is not to be shown. The set thus becomes almost completely concealed. This leaves only a series of scattered infant bones below the south wall of Unit V Room 25 to be taken care of. When this group is investigated a little further, it will be possible to decide whether it is worth exhibiting after the wall is stabilized.

Architectural Enterprise: At first regarded by the NYA crew as an unsavory assignment, the project of sewer top construction fairly hit its stride toward the last. As the masonry wall began to take shape, increasing care was lavished upon it by the boys, and the structure became quite interesting as the mold and steel reinforcements for the top were laid down. Enthusiasm mounted as the concrete was poured until the boys were barely restrained from adding a decorative cornice. We were persuaded to allow a fine inscription of date and NYA letters to be graved in the cement, however, and the whole enterprise is now safely covered with two feet of earth.

SWNM

ORGAN PIPE CACTUS

By William R. Supernaugh, Custodian
Ajo, Arizona

Visitors this month, 1500; travel year to date, 5980

General: Weather has continued wet and the wells dry, here. Heavy rains occurred all through the first of the month, but it is now nearly perfect weather as usual, and has brought about what I am told are the best flower displays in the State. Visitors refuse to believe that they are visiting a desert area, as all ground is covered with flowers.

The well in progress last month was ended in solid dry rock at 170 feet. After completion of new headquarters sites, the rig was moved to the southern part of the monument where drilling is again going on at a depth of about 60 feet in the new location.

One official trip off the monument was made to meet Mr. James Kieley of the Washington office. Mr. Kieley is making color pictures in both movie and stills as well as black-and-white for use in the Washington office and for publicity purposes. Work was started on the taking March 19th and will finish about May 1st.

Dr. W. B. McDougall, regional biologist, arrived at Organ Pipe on March 19, also for the purpose of studying flowers. He brought with him and turned over to the monument a collection of 243 plant specimens collected by A. A. Nichol. Work in the field at the present time has

added many new specimens, so we will soon have a good start on an herb-
arium.

After inspection trips by Assistant Superintendent Richey and Architect Jerry Miller, master plan project sheets were gotten out and referred to Headquarters.

One day and night was spent with Dr. Lake Gill of the Bureau of Plant Industry in the study of cactus diseases. Plans were made for co-operative work with this department in further study and for observation plats.

By taking advantage of the good nature of Joe Golden, while he and Helen were visiting the monument this month, the files were gone over and all material put in the proper places so that I will now be able to keep up with this work in the proper way.

The Port-of-Entry on the Sonoyta road has been declared an entry for cattle, and well development and dipping facilities are now under construction on the privately owned land in that area.

Wildlife: Antelope are increasing on the monument and are now being seen from the Sonoyta road as well as the western part and Growler Pass.

Another band of Bighorn sheep were located near Alamo canyon. The number in this band is not as yet known, but it seems to be one of the biggest on the area and pretty well permanently located.

White wing Dove observations are started, and this study will be made in co-operation with Mr. Johnson Neff of the Fish and Wildlife Service.

Visitors: It seems that all officials know when to come to Organ Pipe and take advantage of the good weather here, but I am glad to have them anyway, even if they do let me get lonesome along in July and August. This months official and Park Service visitors were, Engineers Preece and Maxwell of the Washington office; Jerry Miller, Dr. McDougall, Paul Balch from the Regional Office; and Chuck Richey, Dale King, Matt Dodge, Park Soule, Joe and Helen Golden from Headquarters. I was also very pleasantly surprised to have Jimmy and Sally Brewer arrive in time to star in the Organ Pipe motion picture which is being shot.

Projects For Ensuing Month: Work will continue with Dr. McDougall and Mr. Kieley until about April 1. The well job will be completed, and another study period the latter part of the month made on the return of Dr. McDougall. White-wing observations will continue as will all routine work.

SWNM

CASA GRANDE

By A. T. Bicknell, Custodian
Coolidge, Arizona

Visitors this month, 2739; travel year to date, 11,166.

Weather: All local records for rainfall continue to be broken as rains in March swell the total for the year. We have recorded 2.61 inches of rain as compared with .03 inches during the same report period last year. Since the first of September we have had 13.04 inches of rain. The average rainfall is about ten inches a year, most of it coming during the summer months from thunder showers. Old timers say that this is the wettest winter since 1911.

The severest storm came on March 14 and 15, with 1.40 inches of rain falling during a storm that was accompanied by heavy winds, thunder, and lightning. Maximum temperature was recorded on February 28 with 83 degrees. Minimum temperature was 36 degrees, on March 9.

Use Of The Monument By The Public: We are still able to report a substantial increase in the number of visitors to the monument over the corresponding period in 1940. However, we are certain that the increase would have been considerably greater if weather conditions had not affected visitor travel. For several days many of the roads leading to the monument were partially blocked by flood waters with a consequent decrease of visitor travel.

Our visitors for the report period totaled 2739, with 2104 of this number taking the guided trip through the ruin. We were unable to give museum lectures to 471 people who made the trip to the ruin. These people came during noon hour when only one person was on duty and he was compelled to stay at the ruin until relieved. We were able to check on an additional 381 people who were classed as "unattended," didn't buy tickets, yet spent some time looking over the exhibits in the museum, giving us a total of 852 unattended visitors in the museum.

The facilities of our picnic grounds were utilized by 414 people in 84 different groups, the busiest single day being on March 9 when 90 persons used the grounds. Many of these picnickers are people who do not see the ruin or museum, but come only to take advantage of our picnic facilities.

Besides the 635 unattended persons who came in and did not take the guided trip, we were able to get a count on 238 people in 79 cars who merely made a circle of the parking area, not stopping to take a longer look.

All states except Florida, Maryland, South Carolina, and Tennessee were represented as well as visitors from England (4), Curacao, Dutch West Indies (3), Switzerland (2), Austria (1), Poland (1), Canada (2), and Mexico (3).

Park Service Visitors: Ranger George Sholly and family of White Sands stopped in on their way back from California.

Ranger Art Jacobsen and family of Yellowstone National Park came in and talked over old times and recent changes in Yellowstone with the custodian on March 23.

General: Ranger-Historian Francis M. Elmore has been collecting specimens for the herbarium which will be sent to the University of Arizona for classification.

Twenty nine of the books which had been sent to Berkeley for repairs were received during the month making a welcome addition to our reference library.

Ranger-historian Elmore lectured at the Miami Lodge, Scottsdale, along with Assistant Naturalist Matt Dodge on March 11. On the 18th, Elmore assisted Matt Dodge at lectures given at the Mesa Rotary Club, the Mesa High School, and at the Arizona Museum in Phoenix.

Natural Phenomena: The so-called desert area around the monument is blooming it's best since 1935. Our mesquite trees are beginning to leaf out, and many desert plants are to be found on the monument. Among the more common ones in bloom or just beginning are the ocotillo, the apricot mallow, fiddleneck, phacelia, creosote bush, and tomatillo.

On March 5 a whip snake about 4 $\frac{1}{2}$ feet long was seen crawling in the bachelors quarters; the first snake reported this season. Several lizards are seen daily in Compound A, including a big Desert Scaly who seems to interest the visitors a good deal. On the 23rd one of the tourists brought in a Gila Monster which he had captured near Chandler, the first reported this season.

After reading the "Monthly Report", which came out during the Custodians' Conference, we had decided not to mention the Casa Grande Horned Owls in our report, but in view of the fact that so many of our Southwestern Monuments Personnel are more or less personally acquainted with the owls, we offer the following information for their benefit. The female owl has been on the nest for some time, and on March 23, Ranger Chrisman and Custodian Bicknell climbed the wall and discovered that three young owls have hatched. They appeared to be a few days old and were all apparently very nearly the same size.

Maintenance: Work was started on the Dike and Contour project March 5 with Foreman Mullenau in charge. He and his crew of two men worked on fills for 3 $\frac{1}{2}$ days. On the eleventh the crew was enlarged by four men and three teams with drivers, and on the 24th a tractor and disc were added to obliterate the old roads on the monument. To date there have been approximately 5500 feet of dikes constructed and 70 acres of contour furrowing finished. This completes about 75 per cent of this part of the project.

The electric stove in the chief clerks quarters required rewiring this month at a cost of approximately \$20.00. The oil lines and valves on two of our heating stoves had to be cleaned due to accumulation of water in the storage barrels.

A water line break was repaired in Park Naturalist Kinn's quarters.

Status of work on the addition to the administration building is the same as reported for last month.

Due to the wet weather this winter it was necessary to remove a few doors and place them down to fit the opening.

Routine and continuing projects for the coming month will be the Soil and Moisture project and the usual guide and contact work. Ranger-Historian Elmore will continue his collecting work for the herbarium.

WHITE SANDS

By Johnwill Faris, Custodian
Alamogordo, New Mexico

Visitors this month, 3,607; travel year to date, 17,823

A month of rather disagreeable weather has slowed us down somewhat. Like many other sections of the country we had much more rain than is usual. Reports show other areas even worse off than we, so perhaps we need not feel badly with only 3607 people in nine hundred four cars.

Ranger Sholly has been on leave during the month and his work has been turned over to Ed Alberts, Relief Ranger, who, of course, does a good job always. Bob Upton has taken over some of our wildlife and ecology work, and spent a portion of two days with Dr. McDougall going over that phase of the work. Both Upton and Alberts have done a large share of checking in addition to files, equipment cards, physical plant cards, etc. Much time has been and will be spent on our warehouse. Zion and Bryce received all of the R. D. trucks and materials stored here, leaving us the full use of our utility buildings for the first time.

The Custodian made one official trip to Coolidge with Gene Stonehocker after his bringing us a water truck, and aiding in getting a disabled Headquarters car to Coolidge. It was certainly nice to get back and slide around on my own roads, instead of having the slides all along the road, as was the case from Superior to Miami and around the Coolidge Dam. The desert was beautiful, however.

The Concession was moved this month from the Heart-of-the-Sands into the headquarters building workroom. This was necessary for several reasons, and even the additional space is not adequate. Some arrangement must be made because in addition to the workroom being too small, concessionaire's storage deprives us of the use of our photography laboratory, the darkroom, and a closet, not to mention the workroom proper. Our monument needs will soon require that we move our specimens out of the headquarters-museum building and store them in warehouse, garage, or other inadequate places unless some action is given to the concession problem.

Visitors of our own Service this month include Paul Franke, and a crew from Zion and Bryce, Dr. McDougall, of the Region III Office, and Gene Stonehocker, Headquarters mechanic, Chief Clerk from Carlsbad, and Ranger Tex Worley, of Grand Canyon.

Work on our annual Play Day problems, contact work, and completion of our unfinished index records will require our entire time the coming month.

Publicity in "National Bus Guide", "Dodge News", "Motor Travel", the travel section of the "Chicago Daily News", and the National Geographic of South America - the exact name I cannot give at present - assures us of the Sands being kept before the public. The El Paso Junior Chamber of Commerce is also featuring White Sands as a point

of interest in a widely distributed booklet put out by that organization. So, Hugh, to the warehouse, and the problems of the coming month.

SWNM

CHIRICAHUA

By Frank L. Fish, Custodian
Dos Cabezas, Arizona

Vistiors this month, 786; travel year to date, 3,422.

General: Travel to the area has shown a nice increase of 47.1 per cent over the same month last year; Out-of-State travel increased 38.9 percent. The weather has been wetter, with a total of 1.76 inches of moisture for the 24 days of the month covered by this report; many days after the storms, the clouds have hung in the canyons making visibility very poor.

The Faraway Ranch is having one to its best years, having filled accomodations the entire month; 11 parties with an attendance of 41 have taken horseback trips through the monument.

A few wild flowers are blooming and by the end of the month the mass display of poppies, blue penstemons, verbenas, and mustards should start throughout the Sulphur Springs Valley on all approaches to the monument.

Reliable sources inform us that six miles of the approach road from Willcox will be hard-surfaced this year, the roads from Bowie and the Bisbee-Douglas areas are in excellent shape. The signing along these roads could be improved, especially from Willcox, but all attempts to receive aid have been answered with the excuse, "Our Chamber of Commerce is not very active and I guess we are too lazy." Willcox is perking up nevertheless and much new building is underway; gasoline sales have increased 79 per cent over last year.

Visitor Statistics: Cars: Visitors: Out of State: Horseback:

1941	189	786	339	41
1940	137	534	244	25

People we should know: Ranger Worley and family of Grand Canyon. Dr. Stein of N. Y., a great Park Booster, showed us colored movies one evening, included Death Valley, Chiricahua, Rose Parade, and Arizona flower displays and sunsets, Tucson Rodeo and Arizona Premier.

Marshall Benedict, Los Angeles Times Motorlog Reporter,

Contacts: The custodian gave a talk on National Park Service Conservation and round table discussion of the subject to 27 members of the Bisbee Garden Club on March 11.

Contacts at Headquarters were made, but due to the rush at peak periods an accurate count could not be kept, but the partial list includes

193 visitors.

Personnel: A trip was made by the Custodian to the Fire School of the Forest Service of March 6 and 7 inclusive.

Hunter Stratton injured his hand in a belt on the compressor and took one day of sick leave, since then he has operated the headquarters while the custodian handled the maintenance end. This time the work was done in an upright position instead of reclining in the wheelbarrow, just a reminder to Latt and Dale, (see photo on Custodian's Conference Banquet place card.)

Acquisitions: The relief model constructed by Washington was received and stored in the Warehouse. It is wondered, Who is going to pay for the freight? The weight is a little over 1200 pounds, and I have not felt equal to toting it to the Orientation Station over the pebbles placed by the landscape men. We are awaiting the aid of some member of the educated force.

Repaired copies of "Insect Enemies of Western Forests", and Manual of Branch Forestry", were received.

Note to stencil cutter: If it wasn't necessary to hurry this to get mailed I could stretch it a couple more pages, but cheer up, the editors may slash some of the more important parts out.

Tell the boys, the grass is growing and the cattle are putting on weight; eat more meat!

GRAN QUIVIRA

By Joseph H. Toulouse, Jr., Custodian
Gran Quivira, New Mexico

Visitors this month; 72; travel year to date, 709

Visitors: Well here we go again, we are behind in our visitors for this month in contrast with this month a year ago, the explanation lies in the conditions of our roads; see below.

Weather and Roads: The combination of these two items has been somewhat fierce. The roads because of weather have been rotten five days out of the week, ever since this custodian slipped and slid into this monument after the Custodians' Conference last month. The conditions have consequently allowed our travel to suffer, and with the present writing it looks as if there is little hope for spring to come even though it has been advertised several times. We have had more rain and snow this month than for a number of years; some of the settlers say since 1916. Temperature high was 68 degrees F. on the first, and low 13 degrees F. on the 10th. The junipers have been blooming this month, but because of the weather this custodian's hay fever has been intermittent, but when it has been clear the hay fever has rampaged, worse

than the spell last year, one day's sick leave was taken in order to obtain some relief.

Acquisitions: Received from Berkeley a repaired volume of the "New Mexico Historical Review" for 1940; also six bound 2 x 2 inch slides, and six recovered volumes of the B. A. E. Bulletins, and the copy of the stabilization report for last fiscal year, returned to Headquarters the file copy here. Received for the library from the Southwestern Monuments Association the following publications: "A Proposed Provision of the Rio Grande Glaze Paint Sequence", "Ceramic Clues", "Population Changes", "Variation of SW. Pueblo Culture" (these all Laboratory of Anthropology bulletins), and La Gran Quibira, a musical mystery. The last one is the book put out privately in 1904 after having been inspired by the ruins of Gran Quivira, we now can say that we have been mentioned in verse and song. Received from the U. S. Forest Service a copy of their Warehouse Supply Catalog of the Albuquerque warehouse, can now get some idea of what we can obtain from them and save us money.

Routine and Continuing Projects: I spoke to the Socorro Rotary Club on March 3, and on route there erected three approach signs to this monument, two at Bernardo. I completed installation of the gas stove by the crection of the stove pipe to carry off all fumes, also fixed a leak in the hot water heater. The State Highway maintenance crew maintained our road which was on the way to being in poor shape because of the moisture received here. Began the setting up of our sherd collections by the assembling of sherd boxes brought back from Coolidge last month; and two new sites were recorded. During the month had the pickup (USDI 1226) brakes checked and the truck greased, also dump truck was aired and tires checked. Prepared and cut a stencil for the revised informational leaflet and Regional Offices ran us off 1000 copies to last until our new printed leaflet arrives. Began the construction on proposed propane gas installation and the job is 50 per cent finished; will complete in this next period. Prepared and forwarded to Headquarters proposed items for preliminary estimates, storm sashes and additional room onto custodian's residence for office space. Began anew the painting of the quarters and applied second coat of paint to bathroom (which is now 100 per cent complete,) and began painting of wood work, until hay fever forced ceasation of this type of work. I received word during the month that our NPA project had been approved under certain conditions and conferred with Regional Archeologist Reed to clear up stand on these, and prepared final papers which were signed and presented to the PA Zone Offices, for approval, consequently we are now praying for the approval by NPA of this job which will aid in stabilizing the ruins and erecting for us a telephone line. Comments were written and forwarded to Headquarters concerning the suggestion of a Salinas National Monument.

Nature Notes: Game Warden Homer Pickens was past and stocked the monument with a covey of quail.

Rare Occurrence: Because of the undue excess of moisture which fell during this period, our cisterns and the cisterns of most of the people of Gran Quivira are overflowing and have had to be bailed at intervals.

Projects for Ensuing Month: I'll complete if possible the propane installation, continue the quarters renovation, hope for more visitors and an improvement of the weather which has hemmed us in; and above all see that the addition to the family arrives.

~~SWNM~~

PIPE SPRING

By Leonard Eaton, Acting Custodian
Moccasin, Arizona

Visitors this month, 43 travel year to date, 380.

Weather: The weather man had the stage most of the time this past month, giving us all kinds of weather, from winter to hot summer. We were again on the cloudy side, having six partly cloudy days: 11 cloudy days, with eight of them bringing storm and bad roads; the remaining ten days were clear and pleasant. In all March was a typical spring month, and not much to complain about.

Visitors: Visitors records are about double those of February, mostly CCC boys so far this year. Total for the month 43. I do look for more travel this summer than I have had for several years, on account of the roads being improved between the monument and the 66 Highway.

Maintenance: The most part of the month the custodian had spent outside, cleaning up the leaves, weeds, along the roadway and in camp area, trimming the trees to make better shade, ditching the road through the monument, and placing signs made during the winter months. We still have several days work on the road to put it back in shape since the winter storms. I might say here we should have the road regraveled through the monument as the gravel placed on in 1936 has been mostly washed off by the rains.

I started Carl Johnson leveling up the old CCC camp site this morning with a team, and expect to have it completed by tomorrow night. I am not going over the entire camp as there is a lot of native brush coming up and I believe we would lose more than we would gain by trying to make the land too level, with a bit of shoveling, washing and erosion can be avoided and we will have the last two years growth of vegetation saved.

Nature: For some reason or other the birds have not come back in as large a numbers as in other years, or they may never have come south last fall, since we had such an open winter. The squirrels and chipmunks, rabbits, and rats have shown increased activity earlier than usual in home building.

The lizards and ants have been out almost since the first of the month. Also the frogs have been croaking, the first one was March 1, in the old swimming pool.

The trees are leafing out and some early flowers are blooming, the ground is almost completely covered with green plant life. We ought to have a good year for crops and flowers.

Other Government Agencies: The three CCC Camps are very active since the roads have dried up so that they can work on the new roads under their program from Highway 89 to the Utah line west of Short Creek Arizona. Also the Indian Service is putting a crew of some 20 men and five trucks hauling gravel. With the new bridges and graveled roads this summer our travel ought to be better. If we can get the Arizona State Highway Department to put up some approach signs at Fredonia, or get funds and do it ourselves to let people know where we are, we should have very little to complain about.

Projects Coming up for Work Next Month: Plans have been going forward slowly this month to get materials to start work on the stabilization of the Fort, and we hope to have the materials in so that work can start early in April. As yet no definite date has been set, nor have I received word that CCC labor has been approved to do part of the work.

I plan to finish up the road ditching, make and lay the service road to the residence area, and rearrange my museum exhibits and label them.

In Closing: We are getting along OK and want to be outside all the time. Spring fever has hit us and talk of planting gardens is about all we hear now. The livestock is in excellent condition this spring and bringing very good prices; some men have contracted their cattle for the best prices in 20 years. In fact it is one of the best years we have ever had with nearly double the moisture over our usual winter storms. Nearly all the washes and smaller gullies have water running in them. It has been this way for three months now, and looks like more storm coming.

SWIM

WUPATKI

By David J. Jones, Custodian
Flagstaff, Arizona

Visitors this month, 113; travel year to date, 894.

Travel: March brought us fewer visitors than last year in spite of fair but somewhat windy weather. The decrease is attributed to the fact that Easter vacation--a period of heavy travel--is later this year. At the Citadel 71 persons registered whereas at Wupatki there were 64. Subtraction of 22 duplicate names brings the travel total to 113. Of the visitors 87 or 77 per cent were from out of state, and 46 of the persons coming to Wupatki Ruin received guide service.

Stabilization: The proposal to make a model survey of ruins stabilization needs at Wupatki through the cooperation of the Branch of Engineering and Branch of Historic Sites is highly encouraging. Not only would it put us years ahead in our stabilization program, but it would settle the highly controversial matters of stabilization techniques and materials. It is hoped that this proposed survey can be undertaken this summer during the excavation at Wupatki and thus include the problems of preserving archeological exhibits in situ.

Samples of red clay from Wupatki were submitted to the Branch of Engineering in order to determine their suitability in a soil-cement mixture for stabilization purposes. No further work was accomplished on the East wall of Room 41 during the month.

Research: Plans progressed on the proposed excavation. Many of the details have been worked out, a grid map of Wupatki Ruin was prepared by Mr. Buchenberg for submission to the Washington Office, necessary supplies were ordered, and sherd collections were completed through the cooperation of Dr. Colton of the Museum of Northern Arizona. An archeological clerk position has been set up and appointment papers are in the process of submission. Before the actual excavation can be started, a workshop will be necessary and we are now equipping one of the garages in the new residence for this purpose.

Interpretation: An interpretive program outline for Wupatki National Monument to be included in the Master Plan was submitted during the month. A lecture illustrated with Kodachrome slides was presented to the Flagstaff Kiwanis Club.

NPS Inspections: Ken Saunders of the Branch of Plans and Designs visited Wupatki on March 13.

General: Considerable time has been consumed during the month with making preparations for the abandonment of the ruin and our occupation of the "white man's pueblo". I am sure that no prehistoric occupant of Wupatki ever encountered quite the same problems in connection with moving to new quarters as we have. Setting up housekeeping in those days was a simple matter. You had a few pieces of pottery, some baskets, and a few skins and sleeping mats. That is about all there was to it. Now we build pueblos with many windows and have to put up venetian blinds to keep people from looking in on us. We "white Indians" pride ourselves on being more cleanly than the old people and feel it necessary to even have chromium plated fixtures in the bath room to emphasize our neatness. And the people have changed; no longer are your guests content to sit on the floor but they must have seats with legs and tables for eating. One of the old people had to worry about their budget. Now times have changed!

Buchy (r. A. E. Buchenberg) arrived early in the month with a trailer in tow of a ten ton truck. This wonderful house on wheels is the envy of the inhabitants of Wupatki Basin. We are only waiting for Clyde to rig up something on this order so that he can move around with

the sheep more easily. As an attraction it is almost competing with the ruin. The Navajos like the short wave radio best, however, and have announced that they will be over every Saturday to listen to the Navajo broadcast from Window Rock.

Some difficulty has been encountered with the pump at Wupatki Spring. It was taken to Flagstaff and worked over, but still is not running properly. The overflow installation at the collecting sump was completed and 100 feet of pipelining for watering Navajo sheep was laid by CCC crews. This pipeline was promised to the Navajos last October. Fortunately there has been water in the surface tanks most of the winter and we have not had to let them water their sheep near the ruin. Finally, however, it was a case of letting them water sheep at the spring or laying what we could of the necessary half mile of pipeline. At the earliest possible date the rest of the pipe should be provided for this purpose.

Clyde Peshalkai presented the monument with the skin of a bob cat he killed along the Little Colorado River.

SWNM

SUNSET CRATER

by David J. Jones, In Charge
Flagstaff, Arizona

Visitors this month, 268; travel year to date, 1660

Travel: A total of 268 visitors is estimated for Sunset Crater based upon the observation that only 50 per cent of visitors register. Of the total travel, 204 or 76 per cent was out-of-state. The fact that actual registration this month was only half of that for the same period last year indicates considerable decrease in travel. This is attributed partly to the fact that Easter vacation is somewhat late this year.

SWNM

SAGUARO

By D. W. Eggermayer, Custodian
Route 2, Box 544, Tucson, Ariz.

Visitors this month, 1937; travel year to date, 8850

Visitors: We had 1937 visitors, arriving in 623 cars, from 40 states, D. C., Canada, and Belgium. Of these, 548, or 28.3 per cent were contacted. Records show 63 picnickers, and 3,097 minutes spent in guide and contact work, including one guided auto caravan of 53 members of the Tucson Natural History Society.

Administration: Three days were spent at the Annual Fire School of the Coronado National Forest, where a great deal of pertinent information was gained.

Official visitors from U. S. and other agencies:- Dr. Lake S. Gill, Senior Pathologist of the Bureau of Plant Industry; J. A. Daniels, E. L. McPhaul, and E. W. Flickinger, all of the Coronado National Forest; George Shelly, of White Sands; Joe and Mrs. Golden, from Headquarters. Non-official, but interested visitors included Dr. A. E. Anderson, of the Pathology Dept., Syracuse University; "Doc" Halliday, long-time friend of Southwestern National Monuments.

Protection: Most of the custodian's time during the month was taken up in preparation for the coming fire season; hiring of packers, trying to hire Lookout-Fireguards (one man now available), hauling of mules and packing and camping equipment for packing horse feed to Manning Camp, conditioning of fire tools, and the building of two small corrals to hold the mules and feed at the foot of Chiminea trail. Packing up the mountain started on March 25.

Signs: Constant complaints have been received since the erection, by the Don's Club, of a new directional sign at the junction of U. S. Highway 80 and Wilmot Road; this is a very beautiful sign, but appears to be wrongly located, in that visitors coming into Tucson from the east are sent to the monument via Wilmot Road, and, coming to its junction with Broadway go right on past and proceed to lose themselves in the Catalina foothills to the north. Also, due to the fact that the county had removed a badly shot-up metal sign at the corner of Houghton Road and the Old Spanish Trail to repair it, then replaced somehow with a sign saying "Prison Camp", we had numerous angry inquiries for two weeks until the mistake was rectified. Lack of directional signs inside the monument continues to be a source of embarrassment, but no time has been found to make the needed signs.

Cooperating agencies: The survey of the bacterial disease of the Saguaro has been continued throughout the month, but under difficulties imposed by mid-semester examinations at the University, and the reduction of the crew by conditions imposed by the Engineering Department. It now appears that the Bureau of Plant Industry will take over this work in toto on or soon after April 1, thus relieving the custodian of a considerable overtime burden.

On the latest information, the Soil and Moisture Division will begin the fencing of a portion of the west boundary of the monument sometime in the coming month.

New Equipment: Four mattresses, with mattress covers; three 2½ lb. D. B. axes, with sheaths; three small shovels, also with sheaths; and six publications, were received.

=====S=====

CANYON DE CHELLY

By Charles D. Wyatt, Custodian
Chin Lee, Arizona

Visitors this month, 12; travel year to date, 369

Weather: Another month of rain and snow but with short periods when the roads were passable so that we have had a few hardy visitors who made their way through the mud to visit this monument. Total precipitation for the month was 1.23 inches. The highest temperature for the month was 67° with a minimum of 18°. Several days of high winds gave us what the old timers called typical March weather in Chin Lee.

Administration: The Custodian had been back from the Custodians' Conference at Coolidge only a little over 24 hours when he was ordered to return to Fort Huachuca, for the purpose of disentangling himself from red tape. This done it is hoped that the army is out of his life forever.

An inspection by Senior Engineer Preece, and Regional Engineers Diehl and Maxwell was contemplated, but the roads kept them out. A relief model of this monument was ordered from the Western Museum Laboratories this month. The rough draft of the 16 pages of the multiples display was finally completed on March 18 and sent off to Coolidge for review. We hope to have this completed for this travel season. During the month we received four volumes of the Monthly Report that had been sent to the Western Museum Laboratories for repair.

Four patrol trips were made up the canyons on horseback; one as far as Mummy cave. Some sort of erosion control should be started at Antelope House in the near future as the spring runoff is cutting farther into the bank there. There is considerable water in both canyons. In lower de Chelly the main stream is belly deep to a horse. The writer can definitely attest to this fact as he got both boots full when he rode into it on horseback. (That water was cold!)

Maintenance: Sewer work during the month kept the Custodian busy as the proverbial paper hanger. Roots and sand were cut out of most of the main sewer, but one space between manholes was too great to use the equipment on hand. An additional manhole will be built as soon as materials can be obtained from Gallup. One timber manhole was made near the residence to facilitate future cleaning. To add to the worries, a stoppage occurred inside the house. Someday someone will have lots of grief on this latter source since all the pipes are buried under the concrete floor.

The Custodian's Office was painted to reduce the gloom and brighten the place up a bit. Now it is possible to see a person's features across the room.

The bathroom received the same treatment as will the kitchen of the residence in the next few days.

Grass and flower seed was planted in the patio. It is encouraging to know that the Iris and Daisies planted by Lena Faris three years ago are still doing nicely.

Use Of The Monument Facilities By The Public: Visitors this month, 12; 1940, 38; 1939, 46.

At long last this monument can report a visitor. The total isn't large but it is heartening to know that there is such a thing as a visitor. Of the 12, three were here before the custodian returned from his sojourn with the Army so they were not contacted. Contact time on the others amounted to 1,010 minutes. (When they come that seldom one feels as though he must give them the works.)

Routine And Continuing Projects for the Coming Month: Work will be done on the road to White House Overlook. The power poles still lying in two feet of snow on the mountain near the sawmill will be brought down this month. Guide and contact work will be carried on as will nature observation and recording.

SWNM

AZTEC RUINS

By T. C. Miller, Custodian
Aztec, New Mexico

Visitors this month, 222; travel year to date, 1861.

General: After a long winter which started early in November with a record-breaking amount of snow and rain, it is at last showing signs of spring. The birds are back, the rock squirrels and prairie dogs are out, and the vegetation has a green appearance. Travel has been light this month due to inclement weather. However, on a few warm, clear days that we have had this month travel has picked up. State Road #55 from Aztec to Cuba has been impassable the most part of the month. However, at the time of this report, it is open and in fair shape. The stockmen and the farmers are wearing broad grins these days because prices have gone up and they have had much precipitation this past winter which will greatly benefit range conditions. It is believed that the wild flowers will make this basin look like a flower garden when the weather gets a little warmer.

Weather: Unusually heavy precipitation has continued throughout the month bringing a total of 1.79 inches of rainfall. We have had 12 clear days, seven partly cloudy days, and nine cloudy days. There is no snow in sight of the monument. However, only a few miles to the north the snow is quite deep in places, causing a heavy runoff. Much water is in evident throughout the San Juan Basin. Weather statistics follow: maximum temperature 68° on March 18; minimum temperature 12° on the 9th.

Use Of Monument Facilities By The Public: Two-hundred and twenty-two people arrived in 63 cars, coming from 29 states, the District of Columbia and Buenos Aires. Of this number, 189 were guided through the ruins in 42 groups and 183 were given guide service in the museum in 40 groups. Information was given to 33 persons who did not make the ruins trip. Guide tickets sold 119; revenue collected \$29.75.

Personnel And Activities Of Other Agencies: Ranger Hastings was on annual leave the first nine days of the month. Ranger Alberts, who was assigned to this monument during January and February on relief duty, departed on March 4 enroute to White Sands National Monument. Fifty hours work was received from the N. Y. A. during the month. The woodwork on the museum cases was cleaned and waxed; this makes the cases more attractive. The remainder of the 50 hours was spent on contact work in the museum. Minor changes were made in museum cases Nos. 3, 9, and 10. A want list was made for museum labels and holders. This was mailed to Headquarters to be reviewed by the Interpretive Department and mailed on to Western Museum Laboratories at Berkeley for making.

National Park Service Visitors: Mr. and Mrs. Bill Stevenson and children, Walnut Canyon National Monument; Ida O. Christianson, nurse, Mesa Verde National Park.

Maintenance, Improvements, and New Construction: Pick-up No. 1235 was overhauled at the Walnut Canyon CCC Camp during the month. This truck broke down 20 miles east of that camp on February 25. The camp superintendent, Bill Stevenson, and Paul Beaubien came to my rescue most handsomely. Bill pulled this piece of equipment in and had it repaired in the shop and Paul furnished me the Walnut Canyon pick-up to continue my journey on home. Superintendent Stevenson delivered truck No. 1235 to this monument on the week end of March 8 and returned the Walnut Canyon truck to Walnut Canyon. We greatly appreciated the fine spirit of cooperation extended by these men and can highly recommend them to any of the other custodians. Walnut is not a bad place to break down.

Much time was spent keeping the old water pump running. The septic tank was discontinued during the month; meaning the one located at the Custodians residence. The tank being installed there many years ago was found to be completely worn out. It was necessary to bypass the tank after cleaning the pit with disincram pump and hauling the contents away in barrels. It was also necessary to dig up 150 feet of the sewer line, clean the line, and replace some broken tile. We also had to regrade the sewer ditch in order to get the proper grade for this disposal line. It is now one inch fall to 25 feet of line, average. The job mentioned above is 100 per cent complete and we are now cleaning the septic tank east of the administration building. The latter appears to be a much smaller job and will be completed at an early date.

Projects Routine, Completed, and Projects For The Ensuing Month:

Public contacts and guide service will be continued. Cleaning of septic tanks will be completed. Administration and monument maintenance will be kept current. Letters in the form of invitations have been prepared and are being mailed to all schools in the vicinity inviting them to visit the monument before heavy travel season starts.

~~SWIMMING~~

TONTO

By John Peavy, Custodian
Roosevelt, Arizona

Visitors this month, 1121; travel year to date, 3,637.

General: Roosevelt Lake is again full to almost total capacity and I am receiving a great influx of visitors on weekends who have come to see the many attractions along the Apache Trail. The combination of the lake and Tonto National Monument brought forth an emergency situation last Sunday; namely, traffic had to be directed in the vicinity of Roosevelt Dam and should have been directed at the monument. However, I had my hands full protecting and interpreting the ruins.

Visitors: A total of 1,121 visitors arrived in 316 cars. I had 108 parties consisting of 490 individuals to the Lower Ruin and eight parties consisting of 26 people made the trip to the Upper Ruin.

Roads and Trails: The entrance road is in fair shape despite a six inch rain between March 12 and 15. The State Highway Department maintained it once during the month. The trail to the Lower Ruin is in fine shape. We are working on it at present. The trail now not only serves as the approach to the Lower Ruin but as one of the most beautiful nature trails that I have ever seen. Now, Tonto's Geology has a setting of the most numerous and beautiful flowers that have been seen in this vicinity for many years. Even the most rheumatic of visitors say that it is a pleasure and not a physical hardship to traverse this steep incline.

Condition of Ruins: Following our last hard rain, water started to run through the many crevasses in the overhang which usually protects the Lower Ruin from any damage. I collected 20 gallons of water in three days, using all of the available receptacles. It was necessary to cover many portions of walls with canvas to break the force of falling water. Despite all possible precautions slight damage occurred on the higher walls and two room entrance thresholds were eroded away. However, I made repairs and these rooms are again accessible to the public.

For many months I have wondered why the rear wall of room eight had buckled and bulged sometime in the past. The recent incoming water

problem solved this question for me. The wall became soaked and gave slightly in the region of the sealed up doorway, which possibly answers the question as to why this doorway was sealed.

At present I have this wall braced and I believe the wall will continue to stand. At least the rain solved the problem of transporting water up to the ruins to use for future anticipated stabilization work. All I had to do was carry the empty recepticals up to the ruin and place them in the most strategic water collecting locations.

Routine, Continuing, and Anticipated Projects: The protection and interpretation program will continue as usual. The trail work will continue until this limited fund is exhausted. Some road work will be instituted in April if a dump truck can be obtained from Headquarters.

A small stabilization project will be completed if local labor is again available, and that situation depends on the weather.

Additional herbarium specimens are being collected and pressed by Marge as new species appear.

Closing: Continued increase of travel warrants a temporary ranger at this monument if proper interpretation and protection of its features is to be accomplished.

A larger parking space and a wider approach road is a pertinent need since the present road and parking area are entirely inadequate for the great numbers of cars entering the monument on weekends.

~~===== SWMM =====~~

TUMACACORI

By Louis R. Caywood, Custodian
Nogales, Arizona

Visitors this month, 1210; travel year to date, 5,008.

Weather: Rain fell five different times during the month keeping the ground damp and the humidity up. Very little wind and plenty of sunshine made ideal days for visitor travel. As there is no weather station here, amounts of rainfall and temperature cannot be determined.

Use Of Monument Facilities: A total of 1,210 visitors went through the mission and museum in 277 parties. This number is an increase over 1,145 who visited the area the same month last year. Arizona travel amounted to 230. An additional 572 people in some way used the facilities of the monument, but did not pay the charge to go through the museum or mission. The Arizona History class of the Patagonia Union High School numbering 19, spent three hours in the monument on March 10.

Park Service Visitors: On March 12, Associate Landscape Architect Miller

and Assistant Landscape Architect Krueger made an inspection. Inspector Carl A. Taubert of the Branch of Recreation and Land Planning inspected the patio garden on Sunday, March 23. Jr. Park Naturalist Robert D. Starrett spent considerable time here on March 24 looking over the museum. Park Ranger Scholly of White Sands and Dr. Halladay of Las Cruces were here on March 24 and suggested a cactus display in the patio garden. They donated a number of cactus specimens for the purpose.

Administration: Routine office work was kept current. Seven inquiries were answered concerning information. A new 16 page Tumacacori information booklet has been issued by the Government Printing Office and the regular supply was received at this office. The circular is very well prepared and illustrated and has filled a long felt need.

The custodian attended one day of the Forest Service Fire Conference Program held in the Santa Rita Mountains. On the day attended, practical fire control was demonstrated. An invitation was received to attend the entire program.

Museum: Mr. Buchenberg was here on March 1 and 2 to inspect the electrical map in hopes that some suggestions could be made to put it in working order. Mr. J. C. Hilgedick, Associate Radio Engineer, is due to arrive here on April 4 and leave April 6, according to a copy of an itinerary received, to repair the electrical map.

Flora And Fauna: The weeds are growing rapidly and Ranger Harkins has spent considerable time clearing areas where visitors walk. A few patches of white and orange poppies are blooming on the monument. This is the first time in five years that poppies have bloomed on the grounds.

A pair of Barn Owls apparently have made their home in the Mission and seem to be building a nest in the roof timbers. The Arizona Round Tailed Ground Squirrels are busy digging new burrows. A Gila Monster is seen near one of the old storage rooms when the sun is warm. The Vermilion Flycatchers have returned and astonish visitors with their color and spectacular "sporting" flights.

Two of the large agave plants on the monument have been attacked by larvae and beetles. One of the agaves was removed some time ago. Two of the beetles were taken to Headquarters for identification. The other agave is infested but has not been removed. It seems that because of the infestation this agave is putting up a supreme effort to throw out a flower stalk. The healthy agaves must be ten years old and have shown no signs of flowering.

Accessions: A number of books were sent from Headquarters to be added to the library. A Union Oil Bulletin describing La Purisima Mission near Lompoc, California was received from the Union Oil Co. of Los Angeles, California.

-----SWM-----

MONTEZUMA CASTLE

By Earl Jackson, Custodian
Camp Verde, Arizona

Visitors this month, 600; travel year to date, 2,502.

Two hundred thirteen tickets were sold, and one annual pass issued, 106 minors entered the Castle free as under age, and six persons were admitted on complimentary passes. A total of 326 persons entered the Castle. Visitors arrived in 165 cars, of which 65 were Arizona cars, while 33 states, Washington D. C., Alaska, Hawaii, and Africa were represented.

On February 26 Gene Stonehocker, Headquarters Mechanic, brought in Dump Truck 1219 for use on the gutter job along the entrance road. He departed on this day with Construction Foreman Mullenaux who had been here estimating a bill of materials on a pending fence construction job.

On February 27 Senior Engineer Preece, of the Washington Office, Regional Engineer John H. Diehl, Associate Engineer Maxwell, and Junior Forester Balch, were all in together to consider revetment repair and possible added construction under the Soil and Moisture program.

On February 28 A. E. Underhill, General Foreman Road Surfacing, arrived to commence construction of a gutter along the hill on our entrance road.

On March 5 Ranger and Mrs. L. B. Worley, of Grand Canyon National Park, were interested visitors.

On March 8 Custodian Jack Cotter of Tuzigoot National Monument was in to show his bride the Castle.

Among non-Park Service visitors for the month were 83 CCC enrollees in three different groups, all from the Sedona CCC camp. Also, on March 20, 17 persons, mostly children, were picnickers and visitors from the V Bar Ranch School, near Prescott, Arizona.

On March 25 the movie industry was ably represented by Henry Fonda and his wife, who are visiting several of the national monuments, and seem very interested.

Weather and Roads: March of 1940 didn't bring much weather, only .12 of rain. This year we've made up for it. We've had 3.64 inches of rain, seven cloudy days, three partly cloudy. Temperatures have been without extremes, with a high of 75 degrees, low of 27. Mean maximum temperature was 66.60, mean minimum 34.92.

If I had John Will Paris of White Sands over here for an hour he could tell you how beautiful central Arizona is now. He could paint a glowing picture of what the heaviest rainfall in 20 winters has done to blanket the country with grass, weeds, and flowers: how beautiful all these exhibits are, and how happy the cattlemen are in anticipation of a good spring for their cows. I can point out that I have never seen the country so lovely in March. In many places on the monument you actually cannot see what the earth looks like, it is so heavily grown over with yellow banks of mustards in bloom, and with dense carpets of alfalfa bristling

with entrancing little purple flowers. And if you want something for sheer exotic and extravagant magnificence, I defy anybody to find anything more lovely than a large algorita bush (*Berberis fremontii*) literally covered with its brilliant yellow flowers.

Much of our rain has fallen this month at night, but roads have been muddy during the day on several occasions, and have hampered tourist travel in places. Construction of a short stretch of approach road near McGuireville, three miles away, (a WPA project) has resulted in an extremely bad quarter mile of road which has been dangerous in wet weather.

No visitors have come via the Lakes route yet this season, and not many from Roosevelt Dam via the Apache Trail. Other approaches have been in pretty good condition with normal amount of travel to the valley, or at least not far from normal.

Routine and Continuing Projects: Maintenance was kept current. Little in special activities was possible. We repaired the parking area road where two under ground pipes across it left sunken areas. Several bushes were planted in the nature trail area between the parking area and the Castle. The southeast room of the administration building was cleaned up and in it was placed our herbarium case and map filing case. Had to tear up the map case to get it through the door, and then John re-assembled it.

A report on ruins stabilization work accomplished in January was written up on the proper sheet forms.

Museum and Education: Two talks were prepared by the Custodian and delivered during the month. One was to a group of 30 Junior High School students at Camp Verde, a 40 minute talk on Roadrunners, the other was a 60 minute conservation talk on snakes, to the Camp Verde High School, about 30 students.

The Custodian and Ranger spent a great deal of their non-contact time this month in making out 85 ethnobotany file cards for the herbarium, and cross-indexing the family cards with another set of popular name cards, so that you don't have to be a graduate botanist to find if we had to enter every known use for all the plants we had (some of these had been previously entered) and we found it very slow work to check through even our meager collection of botanical references. But the result is a herbarium which is really becoming very useful to us. Of course, without the careful work of organizing in the herbarium which was done last year by former Ranger Bill Bowen, our work would have been very much handicapped.

Construction Projects: On March 3 A. E. Underhill started construction of a gutter for the long hill on our entrance road. To date, working with an average crew of eight men, he has accomplished about 90 per cent of the job. Work accomplished is as follows: 1,030 feet of gutter completed, 100 feet of trough built where entrance road joins parking area, and 15 feet of curbing built. A headwall was reconstructed for a 36 inch culvert, and an apron built above it. At the entrance to the parking area a manhole was reconstructed.

Proposed work during April: According to latest word I have received, Park Archaeologist King will be on hand to supervise and assist in installation of new museum cases in the museum. This work alone, plus arranging of exhibits, could more than take what spare time will be available.

It seems likely construction of a fence around the monument may start in April. It is inevitable the custodian will need to spend time assisting the project with hunting labor, book work, etc. The Nature Trail revision will be undertaken in April if time allows. We will be busy a very large part of the time taking care of visitors..

Personnel: The custodian was sick in bed for a day and a half with laryngitis, or some such outlandish ailment.

General: Despite the fact that travel dropped slightly this month under March of 1940, I think the bad weather was the cause, and that there really is an upswing in visitors. Certainly, there is a wide distribution of visitor sources for this season. In the last two weeks the guest ranches of the valley have been doing a flourishing business, and that is always a sign that things are looking up.

No campers have used our limited facilities (or rather lack of facilities) during the month, but several groups of picnickers have made themselves at home, and a large group is expected this afternoon.

In general, this monument seems to be ticking along satisfactorily from this end.

SWIM

NATURAL BRIDGES

By Zeke Johnson, Custodian,
Blanding, Utah

Visitors this month, 0; travel year to date, 0.

Well, here I am ready to make a stab at getting out to the monument, but I fear that it will be several weeks yet before I can make it. We have had a lot of wetfall lately although it has been real warm for this time of year.

Yes, I surely did enjoy my trip to Coolidge, and thank all concerned for the kindness shown me. I came back bragging to Elnora about the many fine things that I did as Scargent-at-Arms; then when the picture came showing me asleep on the job, well, I won't tell what a kick I got out of it. Oh, that was a stunner to me, and I can't believe yet that I went to sleep on the job, but of course the proof has been sent to me. Elnora and my lovely daughters sure got a big kick out of it.

Hugh, you say I must have made an impression on the ladies at the banquet and dance; well, I hope the impression wasn't all bad as I tried to be good. Tell them all "hello" for old Zeke.

I'll let you know as soon as I can get out to the monument so you can come up and bring the new victim to take my place. I'll bet he'll be a nice fellow; he's sure to be.

Yes, we ought to have 700 or 800 more informational leaflets to distribute although I have a few left over from last year.

Remember, the last days of April and early May are the days when the Sweet Peas and Sweet William are so beautiful along the highway on the side of the Elk Mountains. Sweet Peas in a homemade garden were never so beautiful, so be here, Hugh, so that you can see them.

Best wishes to all the gang.

SWINE

EL MORRO

By Robert R. Budlong, Custodian
Ramah, New Mexico

Visitors this month, 0; travel year to date, 171.

The month has fled with the winds of March, and there is little to report.

Weather: Maximum temperature during the month, 58 degrees; minimum 16 degrees. We had a total of 15.4 inches of snow, and some very heavy rains. Total moisture 2.38 inches. High winds, lightning and thunder, snow, rain, hail and sleet have contributed their share of violent weather.

Roads: None. We have been unable to reach Gallup.

Visitors: None. They have been unable to leave Gallup.

Trail: Much work has been done along the trail during the month. This has involved clearing of dead weed stalks, minor repairs to edges of trail, tamping of places showing tendencies to swell and crack, etc. This has been possible only on the south side of the rock, the north side still being deep in snow.

Erosion Control: On the 14th we had a heavy snow that melted rapidly, with great run-off of moisture -- the first of the winter. All other moisture merely sank into the ground. As anticipated, the old erosion dams did a beautiful job of erosion. The same old trouble: run-off filled the dams and ran around the sides, collapsing banks with great cave-ins, and widening the arroyos badly. What we need here is a series of small dams, close together, centers lower than sides, wings carried well into the banks, and splash aprons at the bases. But something must be done and soon!

General: Much cleaning of grounds around residence was done; more seeds of wild flowers were planted, old weed-stalks cleared away. Work was begun in the patio, laying-out the area for a flagstone walk, and hauling and placing loads of earth for a grass plot. This is in conformity with the approved plan. Library cataloguing of books has gone steadily forward. Much work has been done on the official files, installing a

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card system covering office orders, headquarters memoranda, etc., for real efficiency and quick reference for future personnel. Correspondence is current.

~~SWNM~~

CAPULIN MOUNTAIN

By Homer J. Farr, Custodian
Capulin, New Mexico

Visitors this month, 400; travel year to date, 6,050.

Travel has been light this month with only about 400 visitors. Snow has been so deep and weather so bad all winter long that there has been but little travel in this whole country this winter, therefore but little has sifted into this monument.

Weather and Roads: And again, daybefore yesterday, we had another 20 inch snow, but now the ground is warm and the sun has some power and this will no doubt go right off within a few days, but the mud will be terrible. A brave attempt has been made to keep the road to and into the monument at all times during the month in a passable condition, and most of the time I have been successful. Weather has been a real bear cat all month with snow, rain, sleet, fog, and wind most of the time. More big black clouds have passed over this monument this month than any previous month I can remember, the high temperature for the month was 44° and the low 6° above.

Maintenance: Maintenance was a routine concern of the Custodian during the month, for the road but little time was had for the trails and it looks as if at this writing there will be little time for the trails next month although they do need attention.

Routine and Continuing Projects: Culverts were cleaned and weeds raked and burned in the ditches along the road preparatory to grading the shoulders. Constant raveling of lava into the road necessitates constant dragging, therefore the slight lowering of the road bed over some of the culverts which before long is going to require re-setting.

Wild Life: This was a very, very bad winter, but our robins, blue birds, and many other birds together with our deer and porcupines stayed right on with us throughout the entire winter. Our deer do not seem to be quite so plentiful; however, I see from two to ten almost any day I am in the park. As Easter nears, thought turns to eggs and a diligent search has been made for porcupine eggs but so far no nest has been discovered.

~~SWNM~~

MOBILE UNIT

By Gordon Vivian, Archeological Foreman
Chaco Canyon, New Mexico

Drainage, Job 1, has been the only active job this month and due to the still unsettled weather no real progress has been made. Work is fitfully under way on a group of 15 rooms and one kiva on the west side. All have been graded and the excess fill removed. All sub-floor wall areas here, from fill line to foundations, are to be given an impervious seal coat and this is half completed. Remaining to be done on this group are the laying of tile lines and one large plating to cover a sloping area of fill.

SWNM

ARCHES

By Henry G. Schmidt, Custodian
Moab, Utah

Travel this month, 197; travel year to date, 901

Weather: Weather, usual! A few days were cloudy with some snow and an abundance of rain; the partly cloudy and clear days were warm and spring-like and were in the majority during the month. Three days of high wind, with sand and dust storms, were no more or less violent than we expected, and March, call it Lion or Lamb as you will, is ending with last evening's fresh blanket of snow rapidly disappearing under the warm spring sunshine that greeted us this morning.

Roads: After months of my howling about the condition of the road leading to the Windows section, it will be a relief to hear that our nine miles of low-grade desert road has been changed to nine miles of high-grade desert road. The CCC maintenance crew is on the job again and progress made in improving this road is more than I had ever anticipated. The roughest hills and worst dips have been re-shaled and the mud holes are now non-existent. The sandy stretches of the road will give us some trouble in a few weeks but with the crew on the job we will be able to keep the road in much better condition this summer.

The road through Salt Valley to the Devil's Garden is passable but very rough.

Visitors: We have climbed back into the "travel increase" class this month, with a visitor count of 197 as compared to 99 for March, 1940. Many of the visitors made the trip into the Windows section and Court-house Towers for the express purpose of taking pictures and were not disappointed. The partly cloudy days were numerous and I am certain the cloud effects and conditions for ideal photography in color will bring many of those visitors back for more.

The main object of our maintenance work on the entrance road to the Windows section is, of course, to make it traversible with as little difficulty and discomfort as possible, and it also affords an equally important advantage in making it possible for me to contact a large percentage of our visitors. Seventeen parties with 99 people were guided through the Windows and Courthouse Towers, and 10 parties with 37 people were contacted on the road into the Windows section.

E. P. Hunt, head of the Department of Health, Stanford University, made a return trip to Arches with a party consisting of Fred Smith, Palo Alto, California merchant; Elwyn Bugge, tennis and fencing coach; and Franklin A. Cathcart, Stanford student. They were guided through the Windows and Devil's Garden sections, where they took color movies. Mr. Hunt is editing a color movie of scenic areas of southern Utah and northern Arizona, to be shown to educational units and civic clubs of Pacific Coast states.

Park Service visitors included Horace Miller, Fruita, Colorado; Raymond Higgins, Santa Fe, New Mexico and Mr. and Mrs. Glenn Boyland, Mesa Verde National Park, Colorado.

Project Progress for the Month: Much of my time was spent with the maintenance crew, working on the Windows section road. The men on the crew are all new hands, but the enrollee leader is rapidly learning the work and is now able to carry on maintenance with less help from the custodian.

Patrols were made of the Windows, Courthouse Towers and Devil's Garden sections.

Cooperation with the survey party running line for the Courthouse Towers to Windows Section road.

Four directional and informational signs were reconditioned and reset.

Projects for the Ensuing Month: Continued maintenance of the Windows section road, placement of boundary markers on the east boundary of the monument, which was discontinued during the winter because of adverse weather conditions, collection and pressing of flowers for identification and mounting as herbarium specimens, and patrol of all sections of the monument, will be carried out.

Notes of Interest: Eagle Rock, one of the interesting formations in the Windows section, fell sometime between March 1 and 3. The pedestal upon which the sandstone likeness of our national bird was resting, still remains. The Eagle-like rock fell to the base of the pinnacle and was reduced to fragments.

A large boulder slipped from the north end of Landscape Arch sometime during the winter months, making the arch approximately 305 feet in length instead of 291 feet.

Lion tracks were noted in both the Windows section and in Devil's Garden. Lions are numerous in the La Sal Mountains, but are quite rare on the monument.

Deer sign is abundant in the Windows and Devil's Garden sections and several deer were seen during the month.

General: Lack of office space has been a handicap and problem at Arches National Monument. This problem has been partly solved for the present as the Moab Garage Company has given me office space in their building and we now have our first headquarters for Arches.

~~SWNM~~

BANDELIER

By Chester A. Thomas, Custodian
Box 669, Santa Fe, New Mexico

Visitors this month, 159; travel year to date, 1,359.

February turned out to be only a teaser, and spring wasn't as near as Jim's robins of last month hinted. March has furnished us with about every variety of weather except the agreeable kind. Thirteen stormy days gave us 4.85 inches of precipitation in the form of snow, sleet, hail and cold rain usually driven by a cold wind. Fog and clouds took up most of the rest of the month leaving only a few that the sun crept through. Glancing back over the record, we find that we've had 110.6 inches of snow fall containing 13.51 inches of moisture since the first of November. According to the records of previous years, this amount of moisture came in our normally dry months, so I hate to predict what the wet ones will be like.

In spite of the roads being listed as impassable for 16 of the 31 days of the month, 53 cars have managed to get through and deliver us 159 visitors. We had to dig some of them out of the mud and yank them into the monument at the end of a chain, but they managed somehow to say that they enjoyed the monument and thought the trip worth while. Who said the age of chivalry had passed? An even hundred people were guided through the ruins in 29 trips and 102 were taken through the museum on 30 parties with 835 minutes spent on museum contacts and 1880 minutes in the field.

Aside from the guiding, we have spent a pretty profitable month. Two trips were made to Santa Fe and two to Espanola on official business. Eden made a trip to Albuquerque. The Otowi Hill road was worked twice, the snow removed from the entrance road several times, the power saw overhauled and repaired, the light plants overhauled and put in a condition which we hope will last during the summer months. Three cases in the museum were virtually complete at month's end and Berkeley is working on a fourth. Thirty-six publications of interest to the monument were donated by the University of New Mexico. Maintenance of buildings continued and a large order of office forms mimeographed.

Office work is still heavy, but the dictaphone loaned us by Region III is saving a great deal of time otherwise spent in typing. The difficulty of transporting cylinders to Coolidge for typing has not yet been satisfactorily solved, but we have hopes. I'll be getting so spoiled, I won't even want to type a few figures into a report if I can figure out some way to dictate them so the transcribers can understand where to put them.

I had high hopes of finally getting a display into each case in the museum before the travel season started, but my money is running out and I'll have to let Pablita go when she works her allotted nine days this month. If Western Museum Laboratories completes Case #15 for us, only #19 will be empty and #17 will be only half finished. Much as I hate it, we'll have to go through another season with an unfinished museum.

Word has come through at the close of the month of the approval of funds for fencing the south boundary of the monument. At about the same time we received word that Young's Ranch Company had purchased the Canada de Cochiti Grant which adjoins monument land on the south. They tell us that they are going to fence the grant and keep all stock off for five years in order to try to build up the land again. With the gaps closed and the boundary fenced, our worries over grazing on the monument should be nearly solved on the south. The only boundary not fenced will be the east, and the Rio Grande acts as a pretty good natural barrier, but cattle do cross occasionally and trespass on the monument land.

Wild Life: A small rat (species unknown) managed to get into Case #25 in the museum and pretty well ruin the wild turkey mount which was the center of attraction in that case. Close examination still does not reveal where he could have gotten into the case. He studiously chewed the feathers off the back and built him a nest behind Matt's Life Zone Case, and then proceeded to gnaw a hole in the bird's left side. A foul odor coming out of a ventilator shaft suggests that the arsenic Philp used to preserve the turkey skin must have given Mr. Rat indigestion, and his remains now rest in the machinery of a ventilation fan. Even Dale King could not make more realistic looking rat holes in the pine needles of the floor of the case than did this intruder.

SWNM

WALNUT CANYON

By Paul L. Beaubien, Jr. Archeologist
Flagstaff, Arizona

Visitors this month, 366; travel year to date, 1,993.

Of the 366 visitors, 115 were not contacted. Some were contacted more than once, giving a contact record of 90 per cent. Many days with light showers or snow flurries discouraged travel, but the roads were always in fair condition.

Park Service visitors were Superintendent Whitcraft of Petrified Forest, Rangers Miller and Worley of Grand Canyon, and G. W. Noffsinger of Glacier. None was contacted.

One CCC guide began contacting visitors on March 13, and two others are now being broken-in.

The new spur road to the Observation Point is now in use, and some painted direction signs have been placed to direct visitors to it. Henceforth, few visitors will be contacted at the old log cabin station.

Water flowed over the Lake Mary dam for weeks before reaching the monument on the 11th. A good sized, roaring stream is still passing. This is the third time I've seen water flowing in the canyon since I arrived in 1934.

Equipment for a Red Cross Emergency First Aid station arrived during the month. The signs and other items have not been unpacked as I expect soon to be able to install the station in the now uncompleted Administration Building.

Quite a bit of time was spent working on the pottery sherds saved from the ruins stabilization project of last year. Before breaking the sherds in order to identify them, I've tried to piece some of the vessels together. Have several far enough along that exact measurements could be taken, but it seems impossible to get a whole vessel. As there isn't a complete vessel in existence, known to have come from Walnut Canyon, I intend to try a bit longer before quitting.

Routing and Continued Projects, and Projects for Ensuing Month: Preparation of nature trail signs; sorting and piecing pottery; and, contacting visitors will be carried out.

SWNM

MT. ELDEN CCC

By Wm. Stevenson, Project Supt.
Flagstaff, Arizona.

At last the weather has turned nice and we are now able to get to all of the projects. We are installing the propane system and laying linoleum in Custodian's Residence which will complete the job.

Headquarters entrance road has been surfaced and shoulders are now being sloped. The rail fence job is progressing well, although the rails are hard to get. Almost enough rock has been obtained to construct another building.

The Wupatki basement excavation is completed and forms should be going up, although I haven't been out to that job for a week, since I have been down with the flu. I am going to have to pull the foreman in for a survey of the power line.

We are in need of some technical information on the signs before we can proceed much further on that project. This week will see the job of removing old pipe from the Water Users' line completed, and we will get it into headquarters as soon as possible.

*****SWNM*****

HEADQUARTERS

INTERPRETERS' REPORT

By Dale S. King, archeologist,
Coolidge, Arizona

PERSONNEL

Archeologist King made a one-day field trip to Organ Pipe Cactus National Monument in company with Assistant Superintendent Charles Richey investigating proposed sites for headquarters development there. He spent the remainder of the month in the office on miscellaneous affairs, attempting to complete projects in readiness for departure for Montezuma Castle National Monument where museum cases will be installed next month. Considerable overtime was spent in company with Luis Gastelum finishing the audit of Southwestern Monuments Association books.

Archeologist Steen spent the entire month in the office. Five days were occupied editing the Superintendent's Monthly Report for February, five and a half days writing copy for two-fold informational leaflet for Canyon de Chelly, and starting to write copy for a 16-page booklet for Casa Grande. Six and a half days completed the report for ruins stabilization jobs performed at Aztec Ruins, and in working on the report for Tonto National Monument. Some materials which will be needed for stabilization at Canyon de Chelly were ordered. The balance of the month was spent in routine duties.

Naturalist Dodge was in the office during the entire month carrying on routine activities. He prepared copy for two-fold multilithed informational leaflet for White Sands, arranged with the Western Museum Laboratories to mimeograph a year's supply of informational leaflets for monuments not on the list to receive two-folds, arranged for the cutting and distribution of herbarium specimen folders to various monuments, and, partly on personal time, contacted 733 people in seven illustrated talks.

110 - NEW OR UNUSUAL ACTIVITIES; CONFERENCES

The project of obtaining photographs of Southwestern Monuments personnel for the Washington Office was almost completed.

Arrival of Russel Mahan, new relief ranger, instituted activities designed to train Mahan in interpretive procedures which he must be familiar with before leaving for the field.

The State Director of National Youth Administration was interviewed in an attempt to obtain additional NYA personnel.

150 - PLAN AND PROJECT STUDIES; TECHNICAL AID IN DEVELOPMENTS

Contour furrowing and dikes being constructed on Casa Grande National Monument with Soil and Moisture funds were inspected to prevent possible damage to archeological features.

Proposed sites for headquarters at Organ Pipe Cactus National Monument were inspected in relation to interpretive possibilities.

A memorandum was prepared for the Director and the Regional Director of Region III stating the opinion of the Southwestern Monuments Interpretive Staff concerning the possibility of combining in one museum the exhibits for several nearby monuments. It was the opinion of the staff that such procedure would be extremely harmful in all existing Southwestern Monument areas with the possible exception of the proposal for Salinas National Monument.

412 - PUBLIC RELATIONS

Manuscripts for two-fold leaflets for Tonto and Canyon de Chelly National Monuments, and for a 16-page booklet for Chaco Canyon were forwarded for further action in the printing program.

An order was placed with Western Museum Laboratories for silk screen posters for Bandelier National Monument.

Arrangements were made with Arizona Highways Magazine to publish an article each month on an Arizona monument until all of the monuments in the state had been covered. The schedule lists Casa Grande in the March issue, Organ Pipe Cactus in April, Montezuma Castle in May, and Walnut Canyon in June.

An unusual number of requests concerning flowering dates of desert species were answered.

The manuscript for a two-fold leaflet for White Sands was finished, but held in the office waiting preparation of a map.

A two-fold leaflet for Saguaro National Monument was started.

413 - EXTENSION SERVICES

Naturalist Dodge presented illustrated talks as follows:

March 3: Osborn School, Phoenix, 350 children.

March 3: Arizona Vocation School, Phoenix, 126 adults.

March 11: Kiami Lodge, Scottsdale, 16 persons

March 19: Mesa Rotary Club, 50 adults

March 19: Mesa High School, 75 students

March 19: Arizona Museum, Phoenix, 46 adults.

On personal time Naturalist Dodge aided the Coolidge High School by taking photographs for their school annual.

421 - PROGRESS OF EXHIBIT PLAN PROJECTS

Plans for the wall case in the Massai Point orientation station were completed and requisitions forwarded to Western Museum Laboratories.

Plans for a horizontal case at White Sands were started.

Plans for temporary rearrangement of museum cases at Tonto National Monument were discussed with Custodian Peavy and a satisfactory arrangement agreed upon.

Arrangements were made for Ranger George Sholly to visit Western Museum Laboratories during a personal visit to California to supervise planning of an orientation map for the entryway at White Sands Museum.

An excellent rough draft for a multiplex display at Canyon de Chelly National Monument was received from Custodian Wyatt and was under study at the end of the month.

BRANCH OF HISTORIC SITES (continued)

Also under study at the end of the month was an improved arrangement for the heat motor in one of the White Sands exhibits.

Completed plans for the reptile case at Casa Grande National Monument were forwarded in requisition form to Western Museum Laboratories.

Request was made to Assistant Museum Chief Dorr G. Yeager that he visit Bandelier National Monument during April to inspect museum developments there. Unfortunately, he was prevented from making the trip by lack of travel funds.

422 - LOANS, GIFTS, ACCESSIONS

Six hundred storage boxes for sherds were received from Western Museum Laboratories. These boxes are, respectively, two inches deep, four inches deep, and eight inches deep. They may be requisitioned by the field from this office.

Two thousand photographic negative envelopes were also received from Berkeley.

Sufficient file folders were received to place the pamphlet file in modern condition, if this project can be started.

430 - RESEARCH AND OBSERVATIONS

Archeologist Steen continued work on artifacts recovered at Tonto during stabilization activities in the early part of the year.

A proposal was received from Custodian McKinney at Chaco Canyon to establish an experimental farming plot, using aboriginal methods of maize and bean culture. Advice was solicited from Alfred Whiting, Ethnobotanist of the Museum of Northern Arizona, who has done considerable research in allied projects.

440 - COOPERATIVE RESEARCH AND OBSERVATION

Specimens of bats from Casa Grande were furnished Robert Flock of the University of Arizona who is studying parasites on these mammals. It was discovered that one of the specimens was the Cave Bat (*Myotis velifer*), a new record for the monument.

Mr. Mulford Winsor, Department of Library and Archives, Arizona State Capitol, was consulted regarding the permanent exhibit being installed there consisting of material from Tuzigoot National Monument.

450 - SOUTHWESTERN NATIONAL MONUMENTS LOAN LIBRARY

A total of 73 publications were added to the library: 35 periodicals, 9 books, and 39 pamphlets. No time could be allotted to accessioning or cataloguing these incoming specimens.

A shipment of 200 repaired volumes were received from Western Museum Laboratories. Receipt of this material practically overflowed the limited shelving space. Most of the books had been catalogued before, and possession of them in their repaired condition considerably improves the usability of the library. Sincere gratitude is hereby expressed to Western Museum Laboratories for this extremely valuable cooperation.

Negotiations were begun with the Statewide Library Project in an

effort to obtain a librarian to work full-time on the Southwestern National Monuments Loan Library.

460 - SOUTHWESTERN MONUMENTS ASSOCIATION

Work was continued by Luis Gastellum and Secretary King on the audit of the Association's books which was virtually complete at the end of the month. Book work of the Association was brought current by the end of the month.

470 - PHOTOGRAPHY AND OTHER VISUAL AIDS

Temporary Ranger Francis Elmore very kindly loaned a valuable series of slides on Indians which will be duplicated for the use of Southwestern National Monuments.

An excellent series of flower Kodachromes of Organ Pipe Cactus National Monument were obtained by Naturalist Dodge during a personal trip to the monument on a weekend. These add considerably to our very excellent flower series.

Personnel photographs for the Washington Office were almost completed.

502 - NEWSWORTHY VISITORS

A. A. Nichol, Ruth and Willard Henning, Gilbert Gleason, John Peavy, Colonel B. H. Pope (relative of Charles Poston after whom Poston Butte near Florence was named), Johnwill Faris, Tex Worley, Jimmie and Sally Brewer, Jules La Vergne, George Sholly, Virgil Hubert of the Museum of Northern Arizona, Reverend Victor R. Stoner, Dr. McDougall.

STATUS OF ARCHEOLOGICAL PROJECTS

A considerable number of reports on ruin stabilization were received with their bindings repaired. Distribution of these reports almost brought to current condition the recordation on ruins stabilization projects to date. Reports distributed were: Gran Quivira, 1940; Cave Ruins, Bandelier, 1940; Long House, Bandelier, 1940; Pueblo Bonito, 1939; Pueblo del Arroyo, 1939; Kin Klizhin, 1938.

Ground plans of White House and Antelope House ruins at Canyon de Chelly were duplicated in readiness for stabilization activities this spring.

A memorandum regarding damage to ruins near Tuzigoot National Monument, received from Custodian Cotter, was forwarded to Senior Archeologist Nusbaum.

A request to the Director was prepared asking that Wupatki National Monument be chosen as the site for a sample survey of ruins stabilization needs which is planned for this spring. It is hoped that the members of the Ruins Stabilization Committee can work on Wupatki National Monument for a month during June. This is particularly desired in view of the research and interpretive activities which are going forward there under terms of the donation of Mr. A. E. Buchenberg.

COMPLETED PROJECTS

Informational leaflets were completed on the following monuments: Capulin Mountain, Tonto, Saguaro, Chiricahua, Bandelier, Organ Pipe Cactus, and Arches. The stencils were cut and forwarded to Berkeley for mimeographing.

Other completed projects, already mentioned above, include: two-fold leaflets for Tonto and Canyon de Chelly National Monuments, 16-page booklet for Chaco Canyon National Monument, exhibit plans for the wall case at the orientation station at Massai Point in Chiricahua National Monument, exhibit plans for the reptile case at Casa Grande National Monument, and distribution of completed stabilization reports for Gran Quivira, Bandelier, and Chaco Canyon.

PROJECTS FOR THE ENSUING MONTH

King will complete the auditing of the Southwestern Monuments Association books, and prepare the annual report for distribution. He will edit the ruins stabilization excavation report on Aztec Ruins by Archeologist Steen, and prepare a rough draft for the map to be included in the Casa Grande 16-page booklet. He will leave for Montezuma Castle National Monument about the end of the first week of the month to work with the staff there in installing the new museum cases. At the same time he hopes to be able to accomplish some work on the Walnut Canyon museum plan by visiting Walnut Canyon and Flagstaff weekends and at slack times.

Steen will complete the manuscript for the Casa Grande 16-page booklet, and will spend about two weeks supervising a Soil and Moisture crew backfilling compounds on Casa Grande National Monument. He will edit an article on Casa Grande prepared this winter by Mr. A. E. Buchenberg. Towards the end of the month he will leave for Canyon de Chelly National Monument for ruins stabilization there, and will shuttle between that monument and Inscription House of Navajo National Monument as time and weather permit.

Dodge will spend the month in the office. He will accomplish routine duties and, in addition, work on the following projects: White Sands and Saguaro two-fold leaflets, article on White Sands for "Parks" magazine, exhibit plan for horizontal cases at White Sands.

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STATION	PERSONNEL		TRIPS		LECTURES		STATIONS		UNATTENDED STATIONS		VISITOR PARTICIPATION Hours	TOTAL CONTACTS	VISITS
	PERM.	TEMP.	No.	Att.	No.	Att.	No.	Att.	No.	Att.			
ANCHERS	1	0	27	136							156	136	197
CAPULIN MOUNTAIN	1	0									4	50	400
CHIRICAHUA	1	0	4	9	44	211					96	193	766
NATURAL BRIDGES	0	0											
ORGAN PIPE CACTUS	1	0	6	19	8	66					136	89	1,500
RAINBOW BRIDGE	0	0											
SACUARO	1	0	1	53			149	495			374	528	1,937
SUNSET CRATER	0	0									34	141	268
WHITE SANDS	3	0			129	419					644	3,950	3,607
TOTAL, HIST. & GEOL.	8	0	38	217	181	696	149	495		4,091	1,444	5,553	8,695
BR. of RES. & INTERP.													
AZTEC RUINS	2	1	42	189	40	183					267	405	222
BANDILLER	2	0	29	100	30	102	1	4			153	206	159
CANYON DE CHELLY	1	0	5	14	3	9					12	23	12
CASA GRANDE	2	1	226	2104	203	1653				852	2,355	3,737	2,739
CHACO CANYON	1	1	5	11	3	8					18	19	8
EL HOFRO	1	0											
GRAN QUIVIRA	1	0	17	72	3	27					59	96	72
GLA. CLIFF DWELLINGS	0	0											
HOVENWEEP	0	0											
HOHOKI C. SITE	2	0	116	491	71	356			50	200	451	847	600
M. V. JO	1	0											
PIPE SPRING	1	0					12	43			22	43	43
PONTO	1	0	108	490	91	432					875	922	1,121
TULAC CORI	2	0	276	1203	277	1210					893	2,413	1,210
TUZIGOOT	1	1	270	599	184	639					297	1,238	654
WINDUP CANYON	1	1	133	34	21	66		230		186	158	330	366
WUPATKI	1	1	100	48	1	25				71	108	144	113
YUCCA HOUSE	0	0											
TOTAL HIST. SITES	20	6	1123	5355	927	4,690	13	277	50	1,309	5,668	10,423	7,319
GRAND TOTAL - MARCH	28	6	1161	5572	1108	5,386	162	772	50	5,400	7,112	15,976	16,014
MARCH 1940	25	13	1666	7910	1311	6,170						14,795	16,149
FEBRUARY 1941	23	7	927	5277	790	1,455	218	757		975		10,737	13,807

BRANCH OF MAINTENANCE

By F. E. Stonehocker, Gen. Mechanic
Coolidge, Arizona

In addition to the regular servicing of cars and trucks the following jobs were completed: complete overhaul of USDI 1251 for use of the Soil and Moisture program and completion of job started on USDI 1237 last month, also a complete overhaul.

USDI 1234 was given a quick once-over for any mechanical trouble; the dump bed was removed, chassis and cab painted, motor tuned up, and serviced for White Sands, to be used as a water truck. Naturalists' panel truck was given a general tuneup, new battery installed, battery cables and distributor points as well as spark plugs replaced. USDI 1247 from Walnut Canyon National Monument was gone through and new piston rings, connecting rod bearings installed, valves ground and bad ones replaced, and is now ready for return as soon as the door glass comes in for replacement of one that is broken.

One official trip was made to White Sands National Monument to take USDI 1234 over to Mr. Farris; trip was via Albuquerque to pick up and mount an 800 gallon water tank on the truck, and pick up a car for use at Headquarters. Car was towed to the Sands behind water truck, and Mr. Farris towed it on in to Casa Grande from there.

While at White Sands I made an inspection of all equipment and talked with Mr. Farris about some repairs needed on the caterpillar tractor. One trip was also made to Montezuma Castle for the purpose of transporting USDI 1219, dump truck to be used on road job there.

SWNM

BRANCH OF ACCOUNTING

By Parke W. Soule, Chief Clerk
Coolidge, Arizona

Vouchers prepared during the month, regular appropriations.....	203
Vouchers prepared during the month, CCC.....	104
Purchase Orders issued, regular appropriation, Hdqrs.....	68
Purchase Orders issued, CCC.....	103
Allotment ledger sheets prepared, regular appropriations.....	496
Allotment ledger sheets prepared, CCC.....	126

Expenditures:	Total for Month	Total to Date
1411000 National Park Service, 1941	11,895.65	22,238.14
140/11000 National Park Service, 1940-41	276.30	1,585.05
14x1010, Roads & Trails, NPS	645.73	5,800.69
1410130 Soil & Moisture Conservation, 1941	559.49	1,203.53
Civilian Conservation Camps	9,399.39	77,722.48
Total	22,776.56	178,549.89

PERSONNEL

NOTES

Newest arrival in the Southwestern Monuments fold is Relief Ranger Russell Mahan and family, who are now living in their trailer parked near the old CCC buildings at Casa Grande. Russ has been getting his "breakin" doing guide work at Casa Grande and helping the interpreters. Name, the now Honorary Relief Ranger Without Pay, has her hands full with the two youngsters, Dennis (nearly four) and Patsy (six come July), in the crowded quarters of the house trailer.

Another new man is Fenton Pulsipher receiving the initial baptism of cutting stencils for the Monthly Report. Fenton is rooming in Coolidge because the Bachelors' Quarters are almost as crowded as the Mahan trailer.

Incidentally, we wonder what name the Mahans' rolling home will earn for itself, a la Prince's "Flying Dutchman". Perhaps someone will suggest a moniker that can be officially applied when Russ gives it a baptism of Chaco or El Morro mud.

Speaking of Chaco mud reminds us that Mac is now carrying full camping equipment in the back of his pickup wherever he goes. Three days supply of grub, Mac figures, will last him until he can get the pickup out of even a Chaco mudhole.

Mac has nothing on Cal., however, in the way of innovations. The Aztec Terror has invented a new-type mule trap which certainly does the job. The big trouble is to get the mule out of the trap. Ask Cal. and Homer for details.

Another previously unappreciated feature at Aztec is the "utility building" which was greatly admired by Project Superintendent Bill Stevenson who recently paid Cal. a visit. It sorta took Cal's breath away when he realized that Bill was enthusing over the Great Kiva.

Charlie Wyatt, up at de Chelly, might borrow an idea from Mac, too. Some sort of demountable camping equipment that could be carried on horse-back might be useful if the horse decides to go home alone as Charlie's did recently. Wyatt indicates that a friendly Navajo with an accurate roping eye saved him an 18 mile walk. It is reported on good authority that Charlie requisitioned a seat cushion for his office chair but that, following the ride, he is using sofa pillows pending the arrival of the seat cushion.

Another custodian encountering difficulty in "sitting down on the job," is Tonto John. Peavy slipped and sat down suddenly on a cholla joint which, in his words, "became a part of my anatomy". With the combined attractions of a full reservoir, widely publicized wildflower fields along the Apache Trail, and the ever dependable ruins, John has been doing a land office business every Sunday of late. John, being a botanist, is very enthusiastic over the Tonto wildflowers, although his enthusiasm is somewhat dampened by copious tears induced by the clouds of pollen which the flowers generate.

Peavy isn't the only custodian who reports the hay fever season in full swing. Joe Toulouse has been suffering spasmodic but severe attacks of the ailment during the flowering period of the junipers. Charlie

Steen, supervising backfilling of ruins at Casa Grande, is another sufferer.

Flowers bid fair to stir up some new inter-monument rivalry. Bill Supernaugh is already claiming to have the biggest and most colorful displays of wildflowers in the Southwest. Bearing out his statement is the action of the Washington office in sending photographer Kioley out to the Organ Pipe to record the colorful scene in movies. Jimmy and Sally Brewer, fresh from annual leave on a dude ranch, arrived just in time to strut their stuff before the camera.

Also enroute after spending a vacation on a dude ranch, Gilbert Gleason of Boston stopped at Headquarters to pick up some last minute information about Natural Bridges. Mr. Gleason is planning an extensive trip of exploration in the Arches country and is also going to ride the range between Blanding and Moab with Zeko Johnson whom he met at the Custodians' Conference.

Ruth and Millard Henning stopped at Headquarters for a short visit on their return to their home near Yakima, Washington. The Hennings have been wintering near Silver City, New Mexico, where Ruth underwent an appendectomy. Convalescence was very slow and the Hennings started home as soon as weather permitted. However, the trip was more tiring than anticipated, and at Phoenix Millard was forced to put Ruth on the train. We have not yet received word from them since they reached Yakima. The Hennings report a pleasant visit with Louis and Winnie in Tucson.

Tommy Onstott, brother of Mary Steen, well known to Southwestern Monuments personnel as seasonal ranger at de Chelly, Tonto, and Bandelier, spent several days at the Steen residence while on leave from the army. Tommy, who received training at the U. of A., was a national guardsman, and is now upholding the reputation for toughness enjoyed by first sergeants, at Camp Barkley in Amarillo, Texas.

Army training tactics were studied by Don Egermayer at the fire fighting school put on by the Forest Service. Don thinks that the parachute method of dropping men and supplies on fires from airplanes is fine stuff, but goes on record as hoping that he won't be called on to participate. Don has been up to his neck all month preparing for the fire season at Saguaro, and Ruth has been handling visitors in his absence. An infected foot caused her considerable trouble early in the month, but reports filter through that she has completely recovered. Visitors to Saguaro have been somewhat confused by the sign "Prison Camp" indicating the road to the monument.

The preceding statement has nothing to do with the fact that Hugh Miller and "Rick" Ringenback have struck up quite an acquaintance with the new Highway Patrolman at Coolidge. Details of this "friendship" may be secured from Hugh and Rick.

Neither has the statement about the prison camp anything to do with the fact that Charlie Steen has recently altered arrangements for his garbage disposal. It seems that the lady on whose land Charlie was dumping his garbage had other use for the property.

Reference to the Highway Patrol reminds us that Francis Elmore is anxiously awaiting appearance of the March issue of ARIZONA HIGHWAYS magazine which is carrying a feature article on the Casa Grande of which

Elmore is the author. Besides breaking into print, Francis has given a number of illustrated lectures to various groups in the Gila and Salt River Valleys during his tour of duty at Casa Grande.

Congratulations go to Cal. Miller for his success in bringing a First Aid course of instruction to Aztec. Cal., who is a public spirited citizen as well as an ~~Asl~~ custodian, has been working on this project for three years.

The Chuck Richeys recently had fish for dinner. The fish, two bass each weighing five pounds, were brought from Parker Dam by Ranger Lewis of Yellowstone National Park who was taking annual leave and stopped in to visit with Chuck. It is reported that, after seeing the fish, Dale King took a trip to Parker and Boulder Dam, but no one has seen any more fish.

Frank Kittredge stopped in at Headquarters for a short visit while on a business trip to Tucson. Griff Dooge, who had never met him before, looked him over for a minute and then asked, "What monument are you custodian of?"

Parke Soule announces that the group photos of the ladies have been ordered from the photographer and that the prints will be distributed to arrive about the same time as this report.

As the March report goes to press, telegraphic word has just been received that Hugh Miller's mother is critically ill. Hugh and Chris. left at once for Beatrice, Nebraska, where Mrs. Miller is in the hospital.

SUM

The
SUPPLEMENT
to the
Southwestern National Monuments
Monthly Report

SOME COSTS OF RUINS STABILIZATION

By Archeological Foreman
Gordon Vivian, Navajo Mobile Unit

Within the past year or two there have been increasing amounts of stabilization work done in some of the archeological Monuments and all indications point to an increase in this trend. As is customary with most types of work, estimates of labor and material costs must be prepared in advance. To date this has been a rather haphazard procedure since no basis for such estimates have been available. In the hope of establishing some sort of ground work from which estimates might be taken in the future we present here job costs for some types of stabilization work done by the Mobile Unit. They include data over a three year period. We trust that the following figures will not be taken as conclusive, for reasons noted below, but be used only as a base with all due consideration being given to local conditions.

Before presenting the costs of individual types of work it might be well to note several factors concerning them. These factors should be taken into account in any job estimates as work conditions over such a wide area as the Southwestern Monuments will vary greatly from those pertaining here.

Primarily, the labor figures on all of the following job types include both job and camp overhead.

That is, each type of work includes the labor of hauling and preparing materials, erecting runways and scaffolding and the operation and maintenance of all equipment used. Second, the figures also include all pro-rated camp maintenance.

Equipment operation and maintenance is such a highly variable factor that it is difficult to give usable data, influenced as it is by age and condition of the equipment, road and weather conditions, length of haul etc. A fair estimate of total labor costs chargeable to year around equipment operation would be between 4% to 5%. Note that these are labor charges only (against drivers, maintenance and repair work) and do not apply to cost of fuel or repair parts. Where stabilization work is short term, a single truck is employed or the equipment is not maintained by the stabilization crew it would be well to decrease the following labor charges by at least 5%. Neither do labor charges include the supervisory personnel.

The maintenance crew for a well established camp where the men are quartered only is small here at least, and on most work done on the Monuments it will not have to be considered. Your arena operation of

a camp maintenance.

Some other and more general considerations balance each other out. First is the fact that the Chaco type ruins from which these figures are taken are large complicated structures, generally isolated somewhere along poor roads. Aggregate for concrete comes only after a 110-mile round trip haul. All other supplies as steel, concrete, lumber etc. must be brought in twice that distance and the maintenance of equipment for this work as well as the actual hauling are charged against the jobs benefiting. Further, our data includes winter operation where progress is much slower.

Work at small sites closer to sources of supply and with only summer operation should find the cost of comparable labor considerable lower, perhaps as much as 10% to 20%.

Balanced against these conditions of locale is the labor supply available to the Mobile Unit. Many of the Navajo employed have been with the Unit at least three years and some, to the knowledge of the writer, have done similar work intermittently over a 10 to 15 year period. In our opinion this more than balances out the advantages of location noted above where only ordinary or untrained labor is available.

CAPPING

These material and labor costs are taken from Pueblo Bonito where extensive scaffolding has been employed, where some rooms are difficult of access and where additional stone is not readily available but has to be quarried at a distance.

Labor costs, including as noted above all camp and job overhead, average 1.3 man days per square yard of coverage.

Material costs of bitumen, including freight, which in most Monuments will equal the original cost of the bitumen, runs to 21¢ per square yard of coverage.

In estimating costs from these figures it should be borne in mind that they are taken from masonry which, either re-laid or copied, is a fine type of surface veneer over a central hearting, the hearting made up of 30% to 40% mortar. The capping extends on average of 10" in depth. For small, more accessible walls these figures should be reduced somewhat; for non-Chaco type masonry where there is a stone or walls without a central hearting and encountered, they may be cut down still more, at least half or taken instead from the following division, surface treatment.

SURFACE TREATMENT:

Surface treatment includes all type of work where the present wall surface is intact, does not need to be added to but requires some minor repairs: replacing small spalls, repointing with soil-bitumen mortar or a combination of both. Also classed as surface treatment is replacement of exposed soil mortar on the ends of walls or on slopes where the facing has sloughed away and this surface not rebuilt but held in its present condition. All such work may be done very cheaply but is usually an accompaniment of other types, patching support etc.

Material costs for repointing or replacement of exposed mortar will

SOME COSTS OF RUINS STABILIZATION (Continued)

run about .03¢ to .05¢ per square yard, labor costs from 0.4 man days to 0.8 man days per yard depending on the type of work and whether small spots are easily available.

In checking over the Monthly Reports for the past few years we ran across some notes by Bob Lister on repairs to the Long House and Otowi at Bandelier. While he does not give labor costs per yard he does include amounts of work done and for purposes of comparison we have attempted to transpose his figures into yardage. It would appear there that similar repair and repointing showed labor costs ranging from one man day per yd. to 3.3 man days per yard. The latter figure included extensive clearing of the site, removal of fill from the rooms and some drainage. While our costs show these as separate items, the comparison is interesting since different labor was used and the walls repaired are totally unlike Chaco masonry. Having seen this work at Bandelier it is our opinion that while the labor costs are high, (if our figuring is correct) very little if any future work in the Monuments will encounter so much additional clearing and removal of fill.

PATCHING:

Under this classification comes all surface treatment where the wall is affected through the depth of the surface veneer. It includes replacement of lintels over openings, resetting or replacement of fallen veneer, patching around vigas sockets and any work involving the laying of masonry in exposed walls.

Material costs of bitumen for this type of work run .02¢ to .03¢ per cu. ft. of masonry laid. These figures are lower than will pertain to sites where larger stone are used and where there is more exposed mortar than in the Bonito walls. Walls of a single or double thickness of stone and wide mortar joints will require almost double the amount of mortar.

Labor costs will run from 1/6 to 1/4 man days per cu. ft. of masonry laid, depending on the masonry and the area worked on. In any line type of masonry the smaller breaks take proportionately much longer to repair than do larger ones.

SUPPORT:

This type of work is the most variable of any in cost. Included in these figures are such diverse jobs as laying concrete cores through walls, building integral structural members to line large breaks, extensions of walls to form buttresses, repair of foundations where removal of fill is required and all types of work where concrete, reinforcing steel, or structural members are required.

Cheapest of this classification is foundation work where the only requirements are removal of debris from the break and replacement of the missing veneer and core. Bitumen costs remain about the same as for patching .02 to .03¢ per cubic foot laid. Labor costs will run a little higher, 1/5 to 1/3 man days per cubic foot laid, due to the necessity of clearing out the break and then replacing the fill after repairs are completed.

Laying buttresses, extensions etc. in larger amounts will increase the materials cost to about .04¢ to .05¢ per cubic foot, but will on the other

SOME COSTS OF RUIN STABILIZATION (Continued)

hand decrease the labor costs to about 1/5 man days per cubic foot.

Where integral structural members, concrete and reinforcing of any type are used, costs mount rapidly. Our records show a minimum of .09¢ a cubic foot for materials in summer with a minimum labor charge of 1/4 man days per cubic foot. Maximum costs of .16¢ per cubic foot for materials and maximum labor costs of 1/3 man days per cubic foot are shown for small inaccessible jobs during winter weather. The maximum materials charge in this case includes soil for heating the work with pressure oil burners during the winter. Such heating can be estimated at 13% of the total materials and will also require the services of watchman, the use of tarpaulins etc.

DRAINAGE:

The following labor figures are taken only from areas where fill has been removed and replaced by clay plying. It involves removal of fill or debris, grading, procurement of the clay, hauling, spreading and tamping or rolling. Labor costs come to 1.2 man days per cu. yd of material handled, both that removed and the clay laid. The comparatively high costs result, in our case at least, from winter operation where all material was frozen and from the difficulty of quarrying and screening clay from tough beds covered with a heavy overburden of soil. Material costs of drainage, aside from equipment operation are dependent only on the amount of tile, if used, and small amounts of concrete. These costs can best be obtained from local sources.

These costs as noted before are from only one type of ruin, a single class of labor and year around operation. As variations from them are noted in other areas the information could well be added to form a more comprehensive outline for costs throughout the Monuments. Specifically, labor costs for white CCC labor would be most important since this is the kind most available to many areas and valuable also would be material costs in almost any non-ventured masonry.

*****STII*****

GEOLOGIC RECONNAISSANCE, NORTHERN ARIZONA, OCTOBER 14 TO 22, 1940

By Assistant Naturalist
Howard R. Stagner, Petrified Forest National Monument

The Chinle formation was traced along the east side of the Defiance uplift from Lupton, Arizona, via Window Rock and Ft. Defiance to Lukachukai, Arizona; around the north end of the uplift between Lukachukai and Round Rock; and down the west side as far as Chinle and Nazlini. The formation was again picked up at Kayenta, Arizona, and continued at several localities to the north in Monument Valley and at Comb Ridge, a few miles west of Bluff, Utah.

Throughout the area the Chinle is a valley-maker, cropping out in the usual broad valley between the bold Wingate, Jurassic sandstone cliffs on the one side and the Shinarump-Croconino sandstone uplifts and low escarpments on the other side. In most places a considerable part of the Chinle section is covered with alluvium and terrace gravels, or is still deeply buried below the valley floor. At a number of points, however, it appears that detailed, nearly complete sections may be studied and accurately measured. The most favorable areas for such study are as follows: Between Window Rock and Ft. Defiance; between Grousewood and Lukachukai; about 15 miles west of Lukachukai; between Chinle and Nazlini; and about 15 miles north of Kayenta, 3 miles north of El Capitan.

Around the Defiance uplift the Chinle crops out around the base of the rather abrupt anticlinal uplift with rather low dips decreasing away from the uplift. In many places the Chinle beds lie nearly flat. A considerable portion of the Chinle section appears to be faulted out between Lupton and St. Michaels, Arizona, but little evidence of faulting in the Chinle was observed in other areas. In the Kayenta-Monument valley the all beds are nearly horizontal, but the massive, resistant Wingate sandstones, rising abruptly above the valley floor effectively covers the softer Chinle in most places. A nearly complete section was observed some 15 miles north of Kayenta, however, and it is believed that good sections can be found along Comb Ridge somewhat north of Bluff, Utah.

Gregory, *Geology of Navaho Country*, separated the Chinle into four divisions, only the lower two, C and D, apparently, represented in Petrified Forest National Monument. The writer was particularly interested in examining the upper divisions, and found that all four divisions were quite clearly recognizable in most areas visited. The lower two divisions are not well exposed at any one locality, and are, in general, nearly completely covered in the Kayenta-Monument Valley area. The line of separation of these two lower divisions is not clearly defined, and

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some doubt exists as to this boundary. It is believed, however, that the top of the tentatively correlated Newspaper Rock Sandstone represents the top of Gregory's division D.

Surprisingly, the fossil leaf shales, formerly believed to be restricted to the Monument area, were found nearly everywhere a considerable part of the lower part of the Chinle was exposed. As in Petrified Forest, these leaf shales occur associated with a distinctive sandstone - below it, or interfingering with it, and everywhere from 100 to 150 feet (estimated) from the base of the Chinle taken as the rather massive white sandstone beneath the exposed varicolored shales. (Sanderling?). The leaf shales and tentatively correlated Newspaper Rock Sandstone were traced from St. Michaels to about ten miles north of Ft. Defiance. The fossiliferous and associated sandstone are conspicuous back of the trading post at Greasewood, and from that point crop out almost continuously as far as Round Rock to the west. Good exposures of the same series occur between Chinle and the Headquarters building of Canyon De Chelly National Monument, and thence southward, with interruptions, as far as Nazlini. Excellent impressions of leaves were found within half a mile of the trading post at Nazlini, and fragmental material was found at Chinle, Greasewood, and several localities between St. Michaels and Ft. Defiance. It is quite probable that the leaf bed and associated Newspaper Rock sandstone will prove to be a dependable horizon marker in the Chinle throughout the northwestern Arizona region, and possibly the Chinle area.

Contrary to all published reports, it appeared to this writer that certain beds in the Chinle are remarkably persistent. These are the bentonitic shales associated with the lenticular sandstones that contain the petrified wood. It is because of the cut-and-fill nature of the sandstone lenses that the Chinle has been described as exceedingly variable. It appears that within a thick stratum of bentonitic shale, itself quite persistent, there may be up to a dozen sandstone stringers and lenses replacing locally the shale. Discounting the presence of the variable sandstone lenses, the bentonite appears as a remarkably persistent, relatively unchanging bed spreading far, perhaps, several hundred square miles.

Petrified wood fragments were found where or the lower two divisions of the Chinle are exposed, and on the north and west sides of the Defiance uplift several fair sized forests occur. However, in this brief reconnaissance, no logs were actually found in place, although the fragments could be traced upward to one or several white, soft sandstone lenses. It is believed, as in Petrified Forest National Monument, that the wood occurs only in the variable sandstone lenses, and never in the fine, bentonitic shales. In color, the wood between Chinle and Nazlini resembles that of the Petrified Forest Monument, but farther north only black, gray and white wood was seen.

No evidence of trees in place, indicating an in situ origin, was found.

The sections and fragments of petrified wood in various parts of the Defiance uplift area differ somewhat in character from the wood in the Petrified Forest National Monument. No sections larger than 18" in diameter were found at Nazlini or farther north. In Petrified Forest the

average size is from 2 to 5 feet in diameter, with some logs as large as 8 feet. At Nazlini a considerable amount of the wood is small, ranging down to stem-like pieces an inch or less in diameter. Material of this size is very rare in the Petrified Forest.

At Nazlini the wood shows much rounding and irregular smooth grooving parallel to the grain of the wood, believed to be the result of water wear prior to petrification. The wood here is less solid, as a general rule, than in Petrified Forest, most of it showing irregular cavities, cracks, pits, and a honeycomb structure which may be the result of considerable decay of the wood before petrification.

Of the sandstone lenses, none was found containing any considerable amount of the rather coarse pebbles and gravel so common in some of the sandstone lenses of the Petrified Forest. Even the Shinarump appeared to contain decidedly less pebble and gravel material than even the higher sandstones in the Petrified Forest area. Furthermore, limestone beds, almost entirely absent from the lower divisions of the Chinle in the Petrified Forest, are common in division B to the north, and also occur in divisions C and D of these areas. The general impression, too, is that the sandstone lenses make up a smaller part of the C and D sections in areas to the north.

In Summary:

1. The combined sandstones of divisions C and D appear thickest to the south in the Petrified Forest area.
2. Gravel, pebbles and coarse sand are present in the sandstones of the Petrified Forest; and become less important to the north.
3. Limestones, rare in the Petrified Forest, increase in importance to the north.
4. The petrified wood shows more wear in northern areas.
5. The petrified wood decreases in average size to the north.
6. The bellerophontic shells (except for thickness, not checked) appear to be quite uniform in character and persistent in all areas.

The following tentative opinions are suggested, subject, of course, to the findings in more detailed field studies and laboratory examinations.

1. Chinle beds are the result of two separate, simultaneously acting agents of deposition.
 - a. Volcanic ash deposition, either aerial, fluvial or lacustrine - the former favored at this time.
 - b. Deposition of coarse material by streams in channels cut into the ash and on flood plains floored by volcanic ash. Streams constantly shifting laterally, and rising in the section as a result of the building up of the land surface.

by ash deposits.

2. Source of streams to south or southwest, and a general northward course of flow. (In general this checks McKee's findings that certain invertebrates found in Chinle pebbles had an origin to the west and southwest of Petrified Forest.)
3. Trees transported from an area foreign to the area of Chinle deposition. It is suggested that the trees were carried by rivers, the larger logs were first deposited in the Petrified Forest area, and the smaller material floated to areas farther north.

Several partial sections were measured roughly, and samples collected for comparison with materials from the Chinle in Petrified Forest. Future work will consist of detailed field studies, the measuring of sections, collection of samples and study of the samples in the laboratory. The following localities should be studied in detail:

1. Detailed sections at short intervals entirely across the Petrified Forest National Monument from south to north.
2. Fort Defiance.
3. Between Lukachukai and Round Rock.
4. Between Chinle and Navlani.
5. North of Kayenta.
6. Along the northern part of Comb Ridge.
7. Tuba City.
8. Near Lee's Ferry
9. San Rafael Swell, Utah.
10. Zion Canyon, Utah
11. Valley of Fire, Nev. Ca
12. Muddy Mountains, Nev. Ca.

The writer also plans to visit several areas where upper Triassic formations crop out in New Mexico and western Texas, but no detailed work is planned in these areas.

SWIM

JOB OF REPAIRING FORT ROOF REQUIRES RESEARCH.

By Leonard Heaton, Acting Custodian
Pipe Springs National Monument

Using an old picture taken in 1886 of the east end of the old

fort, I measured the cornice boards and large rock next to the roof of the lower building, north side.

Rock, $12\frac{1}{2}$ inches wide, 27 inches long.

Cornice board larger of the two, end sloping cut, 11 inches.

Cornice board, small one, end sloping cut, 5 inches.

Length of the cornice, 10 feet, $7\frac{1}{2}$ inches.

On the small cornice board, 4 knots show up on the picture. These were measured as follows: $3\frac{1}{2}$ inches, $8\frac{1}{2}$ inches, 17 inches, and 29 inches, measurement taken from the end of the board to center of the knot.

From the above figures I come to the conclusion that the original shingles were about as follows:

Thickness, $\frac{3}{8}$ to $\frac{1}{2}$ inch

exposed surface, 5 inches

Overhanging the cornice on the ends of the building,
about 1 inch.

Overhanging at the eaves, 3 inches.

"Length of the shingle I got from Mr. Riggs as standard length in the 70's was 16 inches, and all shingles were made of straight-grained timber, as it was split by hand and not steamed as the shingles are today, but cut from the green tree as they were cut."

In view of this report we plan to buy hand-split shakes, $\frac{1}{2}$ " butt, 16" long, if they can be obtained and if this is agreeable to the plans and Design Division of your office.

*****SWM*****

SOUTHWESTERN MONUMENTS

MONTHLY REPORT



APRIL 1941

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

SOUTHWESTERN NATIONAL MONUMENTS

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HEADQUARTERS

SOUTHWESTERN NATIONAL MONUMENTS
NATIONAL PARK SERVICE

COOLIDGE, ARIZONA

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HUGH M. MILLER, SUPERINTENDENT

<u>FIELD STATION</u>	<u>POST OFFICE</u>	<u>CUSTODIANS</u>	<u>1940 VISITORS</u>	<u>ACRES IN AREA</u>
1. ARCHES	Moab, Utah	Henry G. Schmidt	2,518	33,680.00
2. AZTEC RUINS	Aztec, New Mex.	Thomas C. Miller	10,550	25.88
3. BANDELIER	Santa Fe, N.M.	Chester A. Thomas	13,689	26,026.20
4. CANYON DE CHELLY	Chin Lee, Ariz	Charles D. Wyatt	2,733	83,840.00
5. CAPULIN MOUNTAIN	Capulin, N.M.	Homer J. Farr	35,100	680.42
6. CASA GRANDE	Coolidge, Ariz.	Albert T. Bicknell	12,877	472.50
7. CHACO CANYON	Chaco Canyon, NM	Lewis T. McKinney	2,245	21,509.40
8. CHIRICAHUA	Dos Cabezos, Ariz	Frank L. Fish	10,120	10,694.80
9. EL MORRO	Ramah, N. Mex.	Robert R. Budlong	1,593	240.00
10. GILA CLIFF DWEL	New Mexico	No Custodian	80	160.00
11. GRAN QUIVIRA	Gran Quivira, NM	Joe H. Toulouse	2,494	610.94
12. HOVENWEEP	Cortez, Colo.	No Custodian	352	285.00
13. MONTEZUMA CASTLE	Camp Verde, Ariz	Earl Jackson	8,078	521.41
14. NATURAL BRIDGES	Blanding, Utah	Zeke Johnson	901	2,740.00
15. NAVAJO	Tonalea, Ariz.	James W. Brewer	513	360.00
16. ORGAN PIPE CAC.	Ajo, Arizona	William Supernaugh	2,775	330,637.00
17. PIPE SPRING	Hocasin, Ariz.	Leonard Heaton, Act.	1,141	40.00
18. RAINBOW BRIDGE	Tonalea, Ariz.	No Custodian	215	160.00
19. SAGUARO	Tucson, Ariz.	Don W. Egermayer	16,892	63,284.00
20. SUNSET CRATER	Flagstaff, Ariz.	D. Jones, in chg.	11,888	3,040.00
21. TONTO	Roosevelt, Ariz	John Peavy	5,240	1,120.00
22. TUMACACORI	Nogales, Ariz.	Louis Caywood	7,287	10.00
23. TUZIGOOT	Clarkdale, Ariz	Jack Cotter	6,125	42.01
24. WALNUT CANYON	Flagstaff, Ariz	Paul Beaubien	12,258	1,373.10
25. WHITE SANDS	Alamogordo, N.M.	John Will Faris	54,498	143,227.44
26. WUPATKI	Flagstaff, Ariz	David J. Jones	3,326	35,865.30
27. YUCCA HOUSE	Cortez, Colo.	No Custodian	136	10.00
TOTALS			232,624	761,206.39

APFA, END TRAVEL YEAR 1940: 1,189,395 Sq. Miles

OPENING

By Hugh M. Miller, Superintendent

It continues to rain in the Southwest and the wave of color is moving northward, lapping the higher levels of mountain and plateau. Spring comes on forever, said the Chinese Nightingale, but rarely such a spring is this.

Returning from annual leave, the superintendent was at Bandelier April 14. Work tempo was high, both on CCC jobs and spring maintenance. Custodian Thomas and Ranger Eden deserve high credit for the amount of work accomplished under handicap in personnel and funds.

Special tribute is due Project Superintendent Chase and his staff for the earnestness with which they are working to bring the camp's program to a satisfactory conclusion by June 30.

A day was spent in the Regional office in very helpful conferences with Regional Director Tillotson and members of his staff on a variety of specific problems.

Chief Engineer Taylor reached Coolidge by train on the morning of the 22nd. Following a day's conference at Headquarters, a party including Mr. Taylor, Associate Engineer Montgomery, the Superintendent, and Sanitary Engineer Hommon, who joined Mr. Taylor in Phoenix, visited Tonto, Chiricahua, and White Sands National Monuments. Mr. Van Dunn of the Water Rights Section was with the party at White Sands. Conferences with this group were particularly valuable. Consideration of engineering, sanitation, and water supply problems on the ground will result in clearer understanding on the part of all concerned. Most difficult problem encountered: how to get the water system built at White Sands. The service owns the water, has secured rights of way for the pipe line, has found no means of constructing it.

White Sands had 54,00 visitors last year, will probably have 70,000 this year. The only potable water is hauled from Alamogordo, a distance of 15 miles. The monument needs that spring water from Dog Canyon.

Tonto needs almost everything but a good custodian. It has that. But no house for him to live in. In fact, it has a good assistant custodian in Mrs. Peavy, who has had to help out with visitors during the heavy travel of the last few months. John and Marge, and little Carol Ann, have been living in a tent for a year and a half. They have been grand about it, have minimized the inconvenience and have done no complaining. That's all the more reason why the Service wants to build that house at Tonto. No one wants to put a premium on squawking, likes to support the thesis that only the squeaking axle gets the grease. And Tonto needs a winter seasonal ranger. No one man can possible take care of the visitors at Tonto during the winter and spring months, and his wife isn't on the pay roll.

Chiricahua was looking fine. It needs another full-time ranger. Here is a full-fledged small park with year-around travel and only the custodian and a maintenance employee on the full-time rolls.

Natt Dodge has a splendid article on Organ Pipe Cactus National Monument in Arizona Highways for April. Well-written, well-illustrated, the

article should be read by everyone who is concerned with the present problems affecting the area. This is dignified, effective publicity of the highest type.

Zeke Johnson, grand old man of the Four Corners Country, was retired April 30 from his position as custodian of Natural Bridges National Monument. Zeke is 72 years old, but looks like a vigorous man in his fifties. His interest in the Service hasn't been retired, and Zeke, with his enthusiasm and vigor, will continue to help keep the monuments young in heart. As custodian emeritus and ex-officio source of inspiration, Zeke will always be a member of the Service family. To him and to Elnora, sincere affection and best wishes.

Easter Services in several of the areas together with the long lag in arrival of hot weather throughout the southern portions of the region combined to bring an unusual number of visitors to the monuments in April. Regardless of a decrease in travel at Capulin, Sunset, Aztec, Bandelier, de Chelly, Chaco, El Morro, and Pipe Spring; due to cold weather and poor roads, records show that 27,002 persons visited the monuments this month as compared with 16,014 in March and 20,952 during April of last year. This heavy increase helped to keep the yearly travel figure well ahead of last year with 105,337 persons recorded as having visited the the monuments since October 1 whereas for the same period of the last travel year only 94,038 were tallied.

CONDENSED REPORT

GIVING HIGHLIGHTS OF THE MONTH

Coolidge, Arizona
May 1, 1941

The Director
National Park Service
Washington, D. C.

Dear Mr. Director:

The Condensed Report for the month of April, 1941, follows:

000 GENERAL

	April 1941	Travel Yr. to date	April 1940	1940 travel yr. to date
<u>010 Travel</u>				
Arches	461	1,362	437	1,236
Capulin Mountain	600	6,650	1,200*	8,700
Chiricahua	1,283	4,705	1,214	3,854
Natural Bridges	0*	0*	14	106
Organ Pipe Cactus	1,500*	7,480*	750*	6,385*
Rainbow Bridge	0*	0*	10*	20*
Saguaro	2,222	11,072	1,959*	13,232*
Sunset Crater	568*	2,228*	748	2,856*
White Sands	10,630	28,453	7,589	19,610
<u>Total Biol.-Geol.</u>	<u>17,264</u>	<u>61,950</u>	<u>13,951</u>	<u>56,049</u>
Aztec Ruins	565	2,426	1,038	2,927
Bandelier	535	1,894	714	2,603
Canyon de Chelly	60	429	206	862
Casa Grande	2,424	13,590	997	8,729
Chaco Canyon	73	266	175	757
El Morro	4	175	178	479
Gila Cliff Dwellings	0*	10*	10*	20*
Gran Quivira	216	925	186	1,042
Hovenweep	0*	43*	0*	10*
Montezuma Castle	929	3,431	653	3,140
Navajo	91	133	34	133
Pipe Spring	46	426	110	302
Tonto	1,820	5,457	507	3,869
Tumacacori	1,174	6,182	912	5,751
Tuzigoot	890	4,175	457	2,357
Walnut Canyon	630	2,623	318	3,354
Wupatki	281	1,175	181	1,109
Yucca House	0*	27*	25*	45*
<u>Total Hist.-Archeol.</u>	<u>9,738</u>	<u>43,357</u>	<u>7,001</u>	<u>37,989</u>
<u>GRAND TOTAL FOR APRIL</u>	<u>27,002</u>	<u>105,337</u>	<u>20,952</u>	<u>94,038</u>
Last Month	16,014	78,535	16,149	73,224

*Travel estimated

CONDENSED REPORT (Continued)

020 General Weather

As prophesied in last months report, the low temperatures and precipitation has continued through April over March of the Southwest. This condition has influenced travel in that northern monuments have been shunned because of bad roads and weather, whereas in the southern areas tourists have stayed longer than usual and travel figures reflect this holdover.

100 ADMINISTRATIVE

110 Superintendent's special activities

Superintendent Miller was in the field the greater part of the month and a detailed of his activities is found on page 183.

120 Monument Inspections

Arches - H. M. Miller, C. Richey, Horrace Miller, G. Norgard, W. Armstrong, A. Z. Dunn.

Aztec Ruins - J. A. Ramsey, and Ranger Frost.

Bandelier - The usual No. of Region III technicians visited the area. (p.21)

Casa Grande - Chief Engineer O. G. Taylor.

Chiricahua - H. Miller, O. G. Taylor, H. Montgomery, and H. Hommon.

Montezuma - R. D. Starrett, R. Maxwell, D. King, and H. Montgomery.

Navajo - John Weatherill, T. Beaubien, V. Shulmen, R. Euter.

Organ Pipe - H. Miller and A. Johnson.

Saguaro - W. Hilgedick, R. Maxwell, H. Miller, W. B. McDougall, L. S. Gill, Paul Lightle, Dr. A. O. Weese.

Tusigoot - H. Montgomery and D. King.

Pipe Spring - G. Norgard, A. Kuehl, Hugh Richey, and J. Davis.

Tonto - J. Golden, N. Dodge, F. Elmore, H. Miller, O. G. Taylor, H. Hommon, H. Montgomery.

Tumacacori - F. Fish, R. Rose, A. Neasham, and W. Hilgedick.

Headquarters - W. Supernaugh, W. Stephenson, W. Hilgedick, J. Kieley, Underhill, D. Egermayer, C. Krueger, J. LaVergne, R. Rose, O. A. Pear, and H. Montgomery.

Walnut Canyon - J. Brewer, D. King, and C. Richey.

Wupatki - A. Jackson, J. Brewer, and E. Dice.

140

140 STATUS OF PRIVATE LANDS

White Sands - Ownership clarification needed (p.190-191).

Wupatki - Attorney A. Johnson studied land problems (p.198-199).

Aztec Ruins - J. A. Ramsey investigated land ownership situation (p.204).

150 PLANS, MAPS AND SURVEYS

Bandelier - South boundary surveyed for fencing (p.218).

160 PUBLICITY

Casa Grande - Arizona Highways Magazine for March carried interesting feature (p.224).

Organ Pipe Cactus - Profusely illustrated article appeared in April issue of Arizona Highways Magazine (p.224).

Saguaro - Saturday Evening Post of April 26 carried color-illustrated article (p.206).

170 COMPLAINTS

Saguaro - Approach road signing still confused many visitors (p.206).

MAINTENANCE, NEW CONSTRUCTION, AND IMPROVEMENTS

210 UNUSUAL MAINTENANCE

El Morro, Montezuma Castle, Tumacacori, - Excessive weed growth occasioned by wet rains causing much extra maintenance.

Chiricahua - Telephone lines, trails, and light plant required repair (p.196).

Canyon de Chelly - Road to Spider Rock Overlook greatly improved (p.211).

Gran Quivira -

Organ Pipe Cactus - North boundary fence repaired (p.205).

Saguaro - Telephone line repair work completed (p.206).

Bandelier - Water system overhauled (p.218).

Chaco Canyon - Many thousand trees planted (p.220).

Tumacacori - Electric map in museum repaired (p.222).

220 NEW CONSTRUCTION

Bandelier - South boundary fence project started (p.218).

Gran Quivira - Easements obtained for new telephone line (p.197).

230 CCC CONSTRUCTION AND OTHER IMPROVEMENTS

Arches - Footings and foundation walls for custodian's residence finished (p.194).

Bandelier - Residence No.4 completed and work pushed on other projs.(217).

Casa Grande - Dike on contour project completed (p.201).

Saguaro - Soil and Moisture project started (p.207).

Walnut Canyon - Parking area 50% complete and custodians residence 100 per cent finished (p.209).

Wupatki - Chore house on workshop completed (p.198).

240 IMPROVEMENTS TO MONUMENT APPROACHES

Considerable work done on Windows Sections entrance (p.194).

Montezuma Castle - Construction near McGuireville completed (p.215).

300 ACTIVITIES OF OTHER AGENCIES

310 UTILITY OPERATOR

Bandelier - Hotel opened on limited basis (p.219).

Canyon de Chelly - Number of improvements made by concessionaire (p.211).

White Sands - Separate building for concessionaire badly needed (p.191).

COOPERATING GOVERNMENT AGENCIES

Organ Pipe - Customs Collector moved in at Port of Entry (p.205).

Saguaro - U.F.S. Rendered great assistance in presuppression preparation (p.206). Bureau of Plant Industry took over work of cactus disease study (207).

330 COOPERATING NON-GOVERNMENT AGENCIES

Saguaro - University of Arizona still aiding in cactus disease study (p.207)

350 DONATIONS AND ACCESSIONS

Bandelier - 100 silk screen posters received and distributed (p.217).

Casa Grande - Old negatives received (p.200).

Headquarters - 110 publications received by Southwestern Monuments Loan Library (p.225).

Gran Quivira - Books and other library items received (p.197).

400 INTERPRETATION

410 LECTURE AND GUIDE SERVICE

All Areas - Interpreters statistics chart on page 227.

Aztec Ruins - Two outside talks made to 146 people (p.205).

CONDENSED REPORT (Continued)

Montezuma Castle - 1 conservation talk given to high school students (p.216).
Bandelier - Color film loaned to St. Louis and New York audiences totaling 800 people (p.217).

Tumacacori - 3 illustrated talks given to 191 people (p.222).

420 MUSEUM ACTIVITIES

Aztec Ruins - Fluorescent lighting installed (p.204).

Canyon de Chelly - Final plans for multiplex being prepared (p.210).

Montezuma - New cases installed and exhibits re-arranged (p.216).

White Sands - Work started on filling two remaining cases (p.225).

430 RESEARCH AND OBSERVATION

431 Botany

Chiricahua - Specimens collected (p.195).

Casa Grande - 54 plant specimens collected (p.200).

Canyon de Chelly - 20 plant specimens collected (p.211).

Organ Pipe Cactus - Regional Biologist made studies and collections.

Dr. A. C. Deese made ecological survey (p.205).

Saguaro - Beautiful flower display covered monument (p.208).

Wupatki - New species of Ephedra (p.199).

432 Zoology

Casa Grande - New snake record for monument (p.225).

Gran Quivira - Rattlesnake out of hibernation (p.197).

Organ Pipe - New band of Bighorn found (p.205).

Tonto - New snake record for monument (p.225).

434 Archeology

Wupatki - Excavation project started (p.198).

500 USE OF MONUMENT FACILITIES BY PUBLIC

510 INCREASE OR DECREASE OF TRAVEL

All Areas - General increase of travel throughout southwestern monuments credited to unusual weather. For details see chart on page 185.

520 NEWSWORTHY VISITORS

All Areas - An unusual number of educational groups visited the monuments this month. These ranged from grammar school groups to scientific expeditions and technical student groups from colleges and universities. They may be found, in detail, as follows: Aztec Ruins, p.204; Canyon de Chelly, p.211; Casa Grande, p.201; Capulin Mountain, p.212; Bandelier, p.218; Gran Quivira, p.196; Montzuma Castle, p.215; Navajo, p.213; Organ Pipe Cactus, p.205; Saguaro, p.207; Tonto, p.202; Tuzigoot, p.210; White Sands, p.189; and Tumacacori, p.211 and 222.

PROTECTION

610 RANGER SERVICE

Bandelier - Last high school boys rescued following all-night search (p.219).

Chaco Canyon - Horseback patrol and fence repair continued (p.220).

630 WILDLIFE PROTECTION AND FISH CULTURAL ACTIVITIES

Wupatki - Seasonal range management program inaugurated (p.198).

640 FIRE PROTECTION

Bandelier - Seasonal presuppression program carried out (p.218).

Chiricahua - Presuppression activities commenced (p.196).

Saguaro - Extensive preparation for seasonal protection made (p.206).

FIELD REPORTS

FROM THE MEN ON THE JOB

EL MORRO

By Robert R. Budlong, Custodian
Ramah, New Mexico

Visitors this month, 1; travel year to date, 172.

This report is being written rather hurriedly -- for the first time in many months transportation seems almost available, and it is hoped that tomorrow the custodian may be able to get out to "civilization" for the first time this year. The month has sped by and our first visitor arrived today.

Weather: Maximum, 65 degrees, April 9; minimum 11 degrees, April 19. We had a total of 12 inches of snow. Snow has fallen today also, accompanied by high winds.

Roads: These are reported very rough, but passable today; they were virtually impassable most of the month.

Visitors: Our first bona fide visitor of the year arrived this afternoon. High winds, much falling rock, and cold weather made the trail trip rather short, but the office was utilized as lecture room in order to give the necessary detailed history and lecture.

Trail: Within the past few days the fine trail has suddenly fallen into appalling condition. The warm sun has started weed growth pushing up through the trail in many places, tearing-up the surface badly. It will become much worse, and immediate maintenance is needed. We seem to have no maintenance funds for this purpose. The past days great quantities of rock have blown from the cliff over the trail, blocking it in numerous places on the north side. Much of this was cleared away, but great amounts of work are immediately necessary.

Grounds: Much of the month was spent working on the grounds, the high winds blowing in trash from surrounding areas; great quantities of dead Russian thistle and weed stalks piled up everywhere, and continued to do so with every high wind. More work was done on grounds immediately ad-

jacent to the residence.

Communication: Last month the radiotelephone receiver blew a tube. Custodian McKinney obtained a replacement tube and had it shipped in, which was greatly appreciated, as we could not get out. This month the plate supply to the transmitter failed completely; no replacement part could be obtained except from Kansas City, and meanwhile we were without such communication with the "outside". The custodian built an improvised vibrator to furnish the required high voltage from our 6-volt supply that has so far worked to perfection, and we were without regular communication for only one day.

Erosion Control: During the month a short illustrated report was furnished the office, showing damage by the run-off of moisture mentioned in the March report. Gopher activity continues, increasing dangers of resulting erosion, and immediate steps should be taken to correct both evils.

General: Work was continued on exhaustive break-down and card cataloguing of files, office orders, memoranda, etc, to make information contained therein readily available to future personnel. This is an endless job; it forms a "continuous" rather than "continuing" project, but will be of great value. Routine work on photographic records of trail, erosion, etc. has been continued. All correspondence is current. Preliminary steps toward appointment of rangers for the coming season have been taken. Frequent inspections and patrols of the area have been made.

During the coming month much work must be done on trail repair and maintenance. No funds seem available, but if the trail is to last, funds must be found. Weed growth and erosion do not wait for new fiscal years.

-SWM-

WHITE SANDS

By Johnwill Farris, Custodian
Alamogordo, New Mexico

Visitors this month, 10,630; travel year to date, 28,453.

White Sands always breathes a sigh of relief in the April Report, because with it we include the Play Day and Easter reports; and what a day is Play Day! Total travel for the month was 10,630 people in 2,118 cars. The weather has been fair on the whole, but with several severe wind storms of late. It seems that the winds are somewhat later this year than usual and the past ten days have kept us jumping to keep up. The roads and buildings will require considerable work to put back into shape.

The custodian was not out on any special investigations, inspections, or conferences during the month. Regular monument inspections of a routine nature were made frequently. Some discussion has been given the area south and east of headquarters and we still are not certain of its actual owner-

ship. It is very important that this be retained within the boundaries and I feel certain that this can be brought about. Your office, or at least the regional office, is probably much better advised than we on this matter.

Naturally with Play Day and Easter the monument has been given much space in all the local and nearby newspapers. All comments have been most favorable and no complaints have been recieved by this office. The concession seems very well established at the headquarters for the less than two months of operation at this location. From many angles the operation of the concession from this the headquarters area is advisable, although small problems come up daily and I suppose only a full season of operation will tell the complete story. The future of the interpretive work and even the concession itself is based on the concession being moved into a building of its own, separate and apart from the museum and offices. Here too, time will tell the story.

All hands have been on the go the entire month. On April 15, we started a schedule running from 7 A. M. to 7 P. M. except on Full-moon nights, during which week we will stay open until 9 P. M. The museum is functioning in a very satisfactory manner. We would like very much to give more time to this type of work and in actual contact with the visitors in the museum, but other duties are too demanding of our time. Checking and janitor work alone keep us on the jump during some of the days when we have several hundred visitors.

The large increase in travel seems to be in line with what we can expect this summer. Even with the heavy winds of late, the travel is high for this season and we are beginning to wonder what we will do when the busy season really starts.

The boys have made several interesting observations and we now have record of several birds rarely seen in this section.

No alarming incidents have occurred and it seems the more visitors we have the better the boys like it.

Sholly returned from his vacation early in the month and Prince moved on to see Frankie Fish at Chiricahua. Prince always does nice work and we wish we might add him, Okie, and the baby to our group. Maybe someday in the orbit in which he rotates he will fly off his course and land here with us; we all hope so anyway.

SWMNM

PIPE SPRING

By Leonard Heaton, Acting Custodian
Moccasin, Arizona

Visitors this month, 46; travel year to date, 426.

Monthly report time again and it doesn't seem as there is a great deal to report on for the month of April. There has not been any marked change in the monument, weather, travel, unusual work being done or anything in the nature side of life. We have just about kept even with work as planned in the regular routine jobs and upkeep.

Weather: The weather gods gave us the same type of weather as we have had for the past months; cold, stormy and some warm days, which brought out the fruit blossoms to be frozen this last week. There are reports that about 50 per cent or more of the fruit was killed by the frost. Of the past month there has only been five clear days, and 14 cloudy days, of which 11 gave us some kind of storm either to make the roads very muddy or just to wet the roads enough to make them slick and hard to get over. There is a saying among the road maintenance crew, "every time we drag the road it rains", and that is about true.

Visitors: There has been more activity among the travel to the monument, 46 being shown through the fort as against 42 for last month and 30 for a year ago.

There has been four different groups of people out to hold evening picnics in the camp ground; total of 46. I am sure if we could have had pleasant weather our picnickers would have been a lot more.

Government visitors to the monument were G. Norgard, from the Plans and Designs, Region III, Al Kuehl, Region III, Assistant Superintendent, Charles Richey, and Assistant Superintendent John Davis of Zion Park.

Our visitors came from the following states; Arizona, Utah, Idaho, Wisconsin, California, and New Mexico.

Projects for next Month: For the coming month most of the time will be spent in the stabilization work on the old fort buildings, since we did not get the materials and men this past month. Nothing has been done on this job. I will be given six CCC boys April 28 and will have four local men working on the place so that by the end of next month I should have something to report on stabilization of the fort.

There are some signs to be made and put up this next month, and a job getting rid of some of the foxtail grass that will be a fire hazard when it ripens in the next six weeks.

Three hours were spent with Al and Chuck last Saturday in very valuable discussions on the monument work and things to be done, with ways to do them. I only wish that I could have had some of the work started for them to see, but Al said some of his men would be coming in about every two weeks or so on inspections.

The Custodian's Work: Beside the regular routing work of guide service, office upkeep and study, and irrigation of trees, he has made two directional signs and placed them on the road between the monument and the U. S. Highway 89, at Fredonia, ditched the road in the monument, dragged the roads after every storm to keep them smoothed up, and made two trips to town for freight and to have a new speedometer cable put in the pickup. Contacting men to come to work on the stabilization of the fort, and getting things ready for this job, has required considerable time.

Closing: We are all in good health, and enjoying ourselves, wishing that the stormy weather would let up a bit, ready to do our best in taking care of our monument, and hope we can show some improvement this summer.

ARCHES

By Henry G. Schmidt, Custodian
Moab, Utah

Visitors this month, 461; travel year to date, 1,362.

Weather: We cannot truthfully, even at this late date, announce the arrival of spring in southeastern Utah. April has continued cold and wet from frequent rain and snow storms. The average annual precipitation in Moab is listed at nine inches, official records for the first seven months of the "weather year" show 13.7 inches of precipitation in Moab valley. The heavy summer cloudbursts will raise this figure by at least four inches. If this rate of rainfall continues we will have a hay crop in Courthouse Towers this fall.

Roads: The CCC maintainance crew has been on the job the entire month, and the road from Highway 160 to the Windows section is in good condition in spite of the rain and snow.

The road down Salt Valley to Devil's Garden and Delicate arch is impassable at present.

Visitors: The Grand County High School of Moab elected to use the Windows Section as the objective on their annual "Ditch-day" hike, and the 209 students and faculty members who participated helped to keep the visitors count for the month up with April of 1940. It is a problem to handle such a large number of visitors in a single day and I gratefully acknowledge the assistance of the faculty members in guiding the students through the area. The students were transported to the end of the road in trucks, and a picnic lunch was served prior to a four hour visit of the area.

Fourteen parties with a total of 114 people were guided through the Windows Section, while seven parties with 84 people were contacted at Willow Springs and on the entrance road.

Park Service visitors included Hugh M. Miller and C. A. Richey, Headquarters, Coolidge, Arizona; Horace Miller, Fruita, Colorado; George Norgard and Willard Armstrong, Santa Fe, New Mexico; and A. Van V. Dunn, San Francisco, California.

Project Progress for the Month: Continuation of maintainance work on the Windows Section road was handicapped by severe weather conditions, but we were able to save all past improvements and to continue with new maintainance on the other sections of the road.

Patrols were made in the Windows Section and Courthouse Towers.

We were assisted by Associate Engineer Horace Miller in flagging two miles of the spur road from Balanced Rock into the heart of the Windows Section.

We submitted water from the headquarters well for testing by the Utah State Board of Health.

Road conditions in Salt Valley made it impracticable to attempt any work on boundary posting.

Our spring flowers are two weeks behind schedule, and collecting and
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pressing of them was accordingly set ahead for next month.

Project for the Ensuing Month: Continued maintainance of Windows Section road, collection and pressing of flowers for identification at the University of Utah, Patrol of all sections of the monument, and placement of boundary markers on east boundary of the monument.

Notes of Interest: Arch number 83 was discovered by Horace Miller and the custodian while on road reconnaissance trip in Windows Section. This arch, located on the north side of Windows Section, one-half mile from the Balanced Rock is approximately 100 feet long and 60 feet high.

SWNM

ARCHES CCC

By Walter W. Welton, Project Superintendent
NP-7-U, Moab, Utah

Job No. 1, Grading and Rip-rapping Channel Change through Headquarters area, which has been inactive for some time due to lack of suitable equipment for handling large rocks, is now in operation with a portable derrick recently constructed in camp.

A considerable increase in speed in cutting the ring stones for Job 2, Multiple Arch Culvert, in the Headquarters Area is expected with the recent loan of a Chipping Hammer from NP-12-A. Thank you, Bill!

A small crew has been working all month trying to maintain a passable, present road into the monument.

The Entrance Road, Section 1-A, is progressing slowly. We feel keenly the loss of the power shovel. Enrollee operators had been trained to the point where they were reasonable efficient and we were ready to start a double shift. A timber trap has just been completed for loading trucks with the Caterpillar and Dozer.

Mr. Alleman, Sr. Foreman (L. A.), is carrying on very ably the masonry work on the Custodian's Residence and the Multiple Arch Culvert. We regret the loss of Mr. Andersen, Jr. Foreman (Masonry) who resigned to accept employment with the Bureau of Reclamation at Provo, Utah, on the Deer Creek Project. All of the footings and foundation walls are completed on the Custodian's Residence.

The job of regrading the Headquarters Area has just begun with the Caterpillar and Hydraulic Scraper. Enrollee operators are being trained and we hope to put this unit on a double shift within a week. A timber loading trap is being built in the upper end of the Headquarters Area to load the excess material into trucks with the Caterpillar and Dozer. Part of this area has 3 to 6 feet to be excavated.

In spite of all of our troubles we are progressing and hope to continue to improve.

CHIRICAHUA

By Ed Alberts, Relief Ranger
Dos Cabezas, Arizona

Visitors this month; 1,283; travel year to date, 4,705.

General: Travel has been good -- an increase of some 700 over the same period last year. Weather has also been good -- for the windy month of April, that is -- and all seems to be well at Chiricahua. Custodian Fish has been on annual leave for a portion of the month, with Relief Ranger Alberts counting the cars in his place. Although surrounding valleys have put on a magnificent flower show, this manifestation has not become very evident in the mountains as yet. Next month should produce a rather good display.

Weather: Maximum temperature was 71 degrees, on March 28, and a minimum of 26 degrees was noted on April 19. Precipitation totalled 2.52 inches, deposited in three storms. Snow fell on Massai Point April 12, but only flurries occurred at headquarters of the monument this date. Range lands are said to be excellent; as Mr. Fish says, "Eat more Beef".

Roads: Approach roads have been good. Onion Saddle route has been passable all this period, it is understood, although rather hazardous for a few days after storms. The Monument road has been maintained in excellent shape despite numerous other duties attendant upon the maintenance man. Trails are open, and in good condition; a fallen pine tree blocks a portion of the Hunt Canyon trail, but will be removed as soon as possible.

Visitors: A total of 1,283 people in 296 cars and eight horse-back groups visited Chiricahua this month. Of these folk, 825 were from within Arizona, and 458 came from other regions, including 32 other states, the D. of C., Alaska, Canada, Italy and France. Special groups included about 150 students from Willcox High School, and a dozen or so from a Bankers' Convention in Lordsburg. Only a few field trips over the trails were given to visitors this month, due to lack of personnel; however, SWM 16 records show that 225 people were dealt 59 museum talks for a total of 1,365 minutes -- or, 22 hours and 45 minutes -- total time. Eight groups, totalling 20 people, stayed overnight at the monument campground for a total of 59 camper-days. It is estimated that 703 people picnicked there, or at Massai.

Museum and Interpretation: As noted above, only the bare minimum of interpretation was extended to visitors this month. A few spring-blooming flowers were collected for the monument herbarium. The concrete relief model destined for the Massai Point Station, is still setting and sitting in the Warehouse.

Maintenance, etc: A multiplicity of duties has kept Maintenance Man

Stratton busy this period. Road work and ditch cleaning has been diligently prosecuted. This work was slowed down somewhat due to a minor breakdown of the Wehr Grader, which was repaired locally and placed in operation again. The telephone line has required considerable attention, as has the old Westinghouse Light Plant. Routine cleanup and policing of grounds, camp area, roads and trails has been continued. Office work is current.

Forest Protection: Preparations for the summer fire season are being made. Daily fire-danger weather readings were begun on April 16. Equipment for the look-out station, to be placed in operation next month, has been put in readiness. All equipment, that is, except for the two monument burros, who have been conspicuous by their absence of late.

Monument Inspections: Only Service officials to the monument were in on April 24, when Superintendent Miller accompanied Chief of Engineering Tayler, Associate Engineer Montgomery, and Harry Hommon, Sanitary Engineer of the Public Health Service, on a thorough inspection of the area. They had a lovely clear day for their examination, and it is not thought that any improvements on the weather could be recommended by any of these gentlemen.

SWM

GRAN QUIVIRA

By Joseph H. Toulouse, Jr., Custodian
Gran Quivira, New Mexico

Visitors for this month, 216; travel year to date, 925.

Visitors: J. W. Hendron, formerly at Bandelier and now working at old Fort Laramie, Wyoming, stopped in while visiting his folks who operate a store in the village, during Easter weekend. Otherwise nothing noteworthy to speak of here. We have had, however, an advance of visitors for this period over the same month a year ago. A goodly portion, some 70 per cent, were outside of the state visitors.

Weather and Roads: These two items have been rather fair this month as is indicated in our visitor totals, although at this writing rain has fallen and roads are temporarily poor; poor enough that even the local people are staying home rather than doing any travel at all. The State Highway maintenance crew was forced to leave their blades here in the village, so that when their work is resumed, of necessity, they will put the road again in good shape. The Junipers have stopped blooming finally and with a sigh of relief from hay fever this custodian looks forward to an interesting and bountiful travel period ahead.

Acquisitions: And still items accumulate! We received this period four repaired volumes from Berkeley, also pamphlet binders from the Western

Museum Laboratory. Also received from Headquarters five volumes to be added to our library here, though as far as we are concerned we now have some five cartons of books packed away in our storage, because of inadequate space for their presentation. The herbarium case with specimens has also been removed from the house to the storage, all are in a dry place and free from other damaging agents -- with all this moving we still are crowded.

Routine and Continuing Projects: Nothing further has been done concerning the completion of the propane installation because of the shut-down on our funds, and as yet no release. We have begun anew the residence renovating, with the kalsomining of the bedroom and small hallway, and the waxing of the floor of the hallway and bathroom. The bedroom and hall woodwork need painting and the ceiling and part of one wall of the bedroom need some more kalsomine. We obtained easements for the telephone line in accordance with instructions from Headquarters from Jones Turner over whose land the line will be erected. Nothing further has been heard concerning the WPA project, still pending. We received during the month the "plates" for the State Historical Marker for our entrance. These are in storage until the erection of standards by the State Highway crew.

Nature Notes: Rattlesnakes were seen in the den in front of the mission on April 12 and caused this custodian quite a leap as he was not prepared for them and saw them at the last moment. Our quail have been active, having been seen and heard frequently.

Projects for Ensuing Period: We hope for some word on the propane installation and, if OK'd, will proceed to complete it. Work will continue on the quarters renovation and completion of the three rear rooms, leaving the living room until next fiscal year because of the necessity of re-plastering the ceiling. General clean up, and perhaps the beginning of the WPA work here, are anticipated.

General: Five days sick leave were taken this period because of hay fever - thought for a while of going into competition with Pipe Spring. Also several other days leave taken in order to be with H. C. W. P. during the arrival of a new member of the Southwestern National Monuments organization or "outfit". (For details - see "Personnel Notes" -- Ed.)

SWNM

WUPATKI

By David J. Jones, Custodian
Flagstaff, Arizona.

Visitors this month, 281; travel year to date, 1,175.

Travel: During the Easter vacation period there was mild travel boom, but rain and light snows somewhat dampened the spirits of travelers in

northern Arizona. Our travel year so far is only slightly ahead of 1940. This month at the Citadel there were 200 registrations and 147 at Wupatki Ruin; 66 names were duplicated. Of the visitors to Wupatki, 122 received guide service. Out-of-state visitors totaled 256, 91 per cent of the travel. Four persons camped overnight, using the "ceremonial" hogan for shelter.

Archeological Research: Excavation of Wupatki Ruin began on April 17 and consisted of trenching on the west slope of the north group to determine the extent of the ruin in that area. Four trenches have been practically completed. It was not expected that this area would be prolific, but even then the rubbish is surprisingly thin. No structures were encountered on the portion of the west slope that has been trenched. At the foot of the slope, however, a shallow and badly weathered surface site was located but has been only partially excavated to date. Roustabout, Phil Van Cleave, reported for duty on April 14, and has proceeded to make himself quite useful in assisting with the excavation, caring for the artifacts, and typing up the daily notes. Phil comes from the University of Illinois and will be with us most of the summer. Mr. A. E. Buchenberg is assisting in the supervision of the excavation and spending long hours over the drafting table drawing trench profiles. CCC Engineer Pinching, NP-12-A, spent one day at the outset surveying our datum points. Until the new CCC crews arrive, sometime in May, the excavation will proceed slowly and consist mostly in finishing the work already started.

Administrative: A trading post is being built on state-owned lands within the boundaries near the Little Colorado river. Emmett Kellum, formerly with the Indian Service, is the owner and plans to do business with the Navajos employed on the Black Falls Irrigation Project. A camp for the Navajos has been established on the other side of the river and at present the irrigation ditches are being excavated.

Arrangements were made with the Navajos living on the Monument to move off again during the summer months, as they did last year. Everyone is pleased with the range management program so far, and I have heard several of the Navajos say that there is still lots of feed left for the sheep this year. However, we are giving more credit for range conditions to the weather man than the management program.

The workshop and a storage room have been completed in the utility area at the new residence. Equipment and collections are finally under adequate shelter.

Stabilization: Some time during the past ten days the lintel and a portion of the doorway in the lower "tower room" at Wukoki, fell. Additional support was placed under it during the latter part of March, but was not sufficient.

During the next month it is planned to complete the stabilization of the east wall of Room 41 at Wupatki.

Newsworthy Visitors: The following NPS: Attorney and Mrs. A. Johnson of Region IV spent most of the 9th at Wupatki getting first-hand in-

formation on our land problems. Jim and Sally Brewer dropped in to spend the night with us on their last trip to town. We did our best to acquire their new pickup but to no avail. Ranger and Mrs. Dice of Grand Canyon came over to see what the Little Colorado River looked like in this part of the country.

Dr. H. S. Colton and Katharine Bartlett came out from the Museum of Northern Arizona the day that we started excavation expecting to bask in the warm Wupatki sun. Unfortunately the cold winds made the day quite uncomfortable.

Al Whiting, also of the Museum staff, came out to do some plant collecting and added another species of Ephedra (as yet unidentified) to the check list.

SWNM

SUNSET CRATER

By David J. Jones, In Charge
Flagstaff, Arizona

Visitors this month, 568; travel year to date, 2,223.

Travel: A total of 284 persons registered at Sunset Crater during the past month from which it is estimated that actual travel was 568. Out-of-state visitors comprised 74 per cent of the total.

SWNM

NATURAL BRIDGES

By Zeke Johnson, Custodian
Blanding, Utah.

Visitors this month, 0; travel year to date, 0.

The only report that I can make this month is that it has rained in the valleys and snowed in the mountains for three days almost steady. Now I am sure we will not get over Elk Mountain before May 15, and maybe not that soon. This is reported to be the wettest section of the State. More rain has fallen than has ever been recorded.

The Gleasons only stayed three days --- too much rain for them. We were to ride out to the monument, but when it just kept snowing in the mountains, they left for Boston. If it just clears up, or stays clear like it is this morning, I will ride out in a few days and then tell you what I find. We are all O.K.

SWNM

CASA GRANDE

By A. T. Bicknell, Custodian
Coolidge, Arizona

Visitors this month, 2,424; travel year to date, 13, 590.

Weather: April of this year has been one of the coolest on record at Casa Grande with only one day of the report period reaching a temperature of 90 degrees -- April 24. Last April there were 16 days of 90 degrees or more during the month. A minimum temperature of 33 degrees was recorded on April 19.

Our rainfall has continued far above normal with a total of 2.03 inches for the report period as compared with .16 inches during the same time last year. These rains came from two storms. The second storm was accompanied by thunder and two separate hail storms.

Use of the Monument by the Public: Travel is still holding way above last years figures, due undoubtedly to the continued cool weather we have enjoyed, and the bad weather still persisting in the northern part of the state. Cool weather has a definite influence on travel, as on the one day during the period which reached 90 degrees, we noticed an immediate decrease in the amount of travel. Many of the visitors during the latter part of the month remarked that they were leaving for home much later than usual and were in very much of a hurry. Our picnic grounds were used by 424 people in 88 different groups, with 104 people using the grounds on the 16th. Our runarounds for the month, those people merely circling the parking area, numbered 280 in 97 cars.

Ticket sales numbered 1,645 for a total of \$411.25, an increase of \$182.50 over last April.

All states except Delaware, Louisiana, North Carolina, and Vermont were represented this month as well as visitors from the following foreign countries and U. S. possessions: England (4), Chile (2), Japan (2), China (2), France (3), Scotland (1), Nova Scotia (1), Mexico (3), Canada (2), and Alaska (2).

Park Service Visitors: O. G. Taylor, Chief Engineer of the Park Service, was a visitor to the monument on April 22.

General: Ranger-Historian Elmore completed the work on the herbarium for this season and the material has been turned over to the Interpretive Staff for identification. Elmore also completed the data on the reptile display for the museum and the materials have been ordered. Elmore has taken a number of natural color flower pictures which will form the beginning of a projection slide library for this monument.

We received an additional 17 volumes from Western Museum Laboratories, where they had been sent for repairs.

Mr. Albert P. Duryee, of Everett, Washington, very kindly donated some negatives of pictures taken at Casa Grande about 40 years ago. The pictures are excellent and we are grateful to Dr. Duryee for his most

welcome gift.

Custodian Bicknell made a trip to Bandelier National Monument on April 4 to pick up a car and a light plant. Russell Mahan, Relief Ranger, was assigned to Casa Grande for temporary guide work. Ranger-Historian Elmore completed his active duty on April 22 and is on annual leave until the end of the month. Pasqual and Legoria Tafoya and Miss Pablita Velarde of Santa Clara Pueblo, New Mexico, were welcome visitors. Legoria is a noted smudgeware potter, and Miss Velarde is the Indian artist who has been painting backgrounds for the Bandelier National Monument museum.

Special Parties: 4/1/41 -- Omer O. Davis, Sacaton, Arizona, 4-H Club of 65 Indian children.

4/6/41 -- D. R. Preston, Safford, Arizona, L. D. S. Mutual class of 13.

4/19/41 -- Owen W. Allen, Glendale, Arizona. Future Farmers of America; party of 8.

Natural Phenomena: The first of our cacti are beginning to bloom with the Staghorn Cholla and the Hedgehog leading the way. Our ocillo fences are also beginning to show a few scattered blooms. Some of the mesquite trees are leafing out beautifully but for most of them the heavy rains this year came too late. Many of the grasses on the monument are already beginning to turn brown and before long we will no longer have a green monument to show to the public.

We have successfully banded three of the four baby owls hatched out in the ruin this year. The old owls have been causing so much trouble to parties in which a dog was taken to the ruin that we have been compelled to bar dogs from all ruin trips.

Maintenance: Foreman Mullenaux continued work on the Dike and Contour project and the job was completed on April 19. An additional 914 feet of dike was completed making a total of 6,414 feet constructed. Another 50 acres of contour plowing brought that total to 120 acres for the project. At the highway borrow pit, eight rock spreaders were constructed. Nine tenths of a mile of the east fence was moved back from the highway 10 feet. A pressure relief valve was installed on the laundry hot water tank as a safety measure and the pipes were refitted. Leaky valves have been replaced over the system. Four stoves were removed from the residences and stored for the summer. Two days were spent working on the trees around the headquarters area.

Under the supervision of Jr. Archeologist Charlie Steen, 38 man days were expended in backfilling Compound F. This is a Ruins Stabilization project and is being performed to save the remaining walls from erosion. At the end of the report period this job was approximately three fourths complete.

With our funds restricted, of course, our activities for the next month will be somewhat limited. Contact and guide work will continue as usual.

TONTO

By John Peavy, Custodian
Roosevelt, Arizona

Visitors this month, 1,820; travel year to date 5,457.

Introduction: The most important topic for discussion here this month is the great increase in travel to this monument. We have had 1,820 visitors this month, an increase of 1,313 or 355 per cent over April 1940, and the total yearly travel to date is 1,768 visitors higher than for the same period last year. I am able to contact about 60 per cent of my visitors and am forced to keep the museum locked during times of heavy travel.

Roads and Trails: The entrance road is in fair shape though rough. Three man days were spent in resurfacing rough spots in the trail to the Lower Ruin.

Visitors: Sunday April 13 hit an all time high visitor count for Tonto. One hundred and ten cars parked on the 15 car parking lot at different times during the day. These cars brought 431 visitors of whom 173 climbed to the Lower Ruins. It is a lucky coincidence that the emergency stabilization of this Ruin had just been completed; as a result the walls suffered only slightly. This great influx of visitors was brought on by the heavy publicity given the Apache Trail in the recent newspapers. The Lakes are full, water is running over the spillways at Roosevelt Dam, and the whole Trail is a riot of color due to a myriad of wildflowers.

Visitors: N. P. S. : We had an enjoyable visit with Joe and Helen Golden on April 6.

Natt Dodge and Francis Elmore traversed the Apache Trail on April 21, arriving here at noon and taking pictures of the Monument for two hours. Come again soon and take more pictures!

Superintendent Miller, Chief of Engineering O. G. Taylor, Sr. Sanitary Engineer Hommon, and Associate Engineer H. A. Montgomery arrived on April 24. We spent four hours in going through the ruins, inspecting proposed entrance road improvement, inspecting the spring and possible capacity and discussing the master plan in general. If we ever start on a physical plant for Tonto, there will be no excuse for not having a good one since we have the perfect location and no existing physical features for hindrance.

Other Visitors: Dr. Spicer and a group of Archeology students from the University of Arizona visited the Lower and Upper Ruins on the morning of April 25. The Physiography group from Arizona State Teachers College visited the Lower Ruins on April 13.

Ruins Stabilization: We completed the necessary work on April 12.

The work consisted of:

1. A 57 foot dry stone masonry wall 21 inches high and 15 inches wide

was constructed in back of the fence. It's purpose is to prevent children from falling out of the ruin, to prevent loss of front ruin fill due to sloughing, and provide a seat for exausted visitors. In time I hope that it will take the place of the guard fence which now detracts from the Ruin photographically and aesthetically.

2. Thresholds in rooms number 5,6,7 and 8 (Stoner's Map) were replaced and recapped. These thresholds or walking surfaces were destroyed by recent seepage of rain water into the cave.
 3. Doorways in rooms number 5 and 10 were repaired and plastered, this work had been started sometime in the past and not completed.
 4. The steps in room number 11 were removed and rebuilt in a more substantial manner.
 5. Loose sections in the walls of room number 10 were recapped.
- Since the necessary water used in this project was collected from seepage in the cave the job of transportation of materials to the ruin was cut in half. Patching material was obtained 1000 feet below the ruin and building stone was carried from the canyon below the ruin. As a result of this manual project, my uniform is again a perfect fit.

Loss to Monument Features: There formerly stood a 48 foot Saguaro one-fourth mile northwest of the museum. This was a perfect specimen having no scars, Bacteriological necrosis, or any other detracting features. I heard a muffled explosion the other day and when I next attempted to show my visitors this superb specimen, it had fallen. Many other specimens in this vicinity are dangerously out of plumb due to weakened root anchorage brought on by excessive rains.

Projects for Ensuing Month: As the season of high temperature begins I hope for a drop in travel so that I may start resurfacing rough spots in the entrance road.

Interpretation will go on as usual.

Closing: I still have hopes for a seasonal ranger in the near future. As conditions appear at present, Tonto is going to rank high in travel among prehistoric Southwestern sites. The reservoirs are filled to capacity, and Roosevelt Dam is one of the most important drawing cards for this monument.

SWM

AZTEC RUIN

By T. C. Miller, Custodian
Aztec, New Mexico

Visitors this month 565; travel year to date, 2,426.

General: April was like the winter months for weather, roads, and travel while the actual number of bona fide visitors is not bad for April despite

weather conditions. Last year our travel included the Easter Sunrise Services when we registered 1,038 visitors. This year the Easter Sunrise Services were excluded and we registered 565 visitors which is really an increase in visitors who were here primarily to see the ruins. The many snowslides in Colorado, frequent snow storms, and State Road 55 being impassable a large part of the month has greatly hampered our travel. However, the quality of the visitor has made up for any deficiencies in numbers that the records might show. Only the cream of the crop would venture out in such inclement weather and by this monument having all oiled roads, we gained the advantage over other areas in northwestern New Mexico.

Weather: Maximum temperature was 68 degrees on April 1, minimum temperature 21 degrees above zero on the 8th. Precipitation for the month; 1.97 inches, being recorded on 15 days during the month. Since winter moved in during November, we have recorded 10½ inches of rain and melted snow which did untold damage to all prehistoric ruins in this monument.

Use of Monument Facilities by the Public: Coming from 20 states, District of Columbia, Canada, and Venezuela, 565 visitors arrived in 123 automobiles. Of these 497 were guided through the ruins in 71 groups, 468 persons were guided through the museum in 73 groups and 67 people saw the museum and received information but did not make the ruins trip. Loiterers and "turn-arounds" were not counted. All visitors were contacted and received service. Many school children visited the monument in organized educational groups. A total of 210 guide tickets were sold with \$52.50 collected.

Newsworthy Visitors: James A. Ramsey, Special Agent, Department of the Interior was here and inspected the last land status acquisition made. Ranger Frost and family, Crater Lake National Park, were monument visitors. The following organized groups also visited the monument: M. E. Crusaders including 15 boys and girls from Durango; 125 CCC boys from the Bloomfield Camp; seventh and eighth grades, Kirtland, New Mexico; freshmen class from Bayfield High School, Bayfield, Colorado; and pupils of the Bloomfield Grade School.

Projects, Routine and Completed: Projects for Ensuing Month: We completed cleaning of septic tank No. 2, and received repaired volumes of monthly reports from Western Museum Laboratories. These were the SWNM reports from 1927 to June, 1940 inclusive. The Berkeley office is to be congratulated on doing such a creditable job. Fluorescent lighting was installed in museum cases 9 and 10 which greatly adds to our exhibits, but makes the other cases in the same room look flat and uninteresting by comparison. More walls in ruins collapsed April 8. (See daily report). The State Highway Department graveled the approach to Estes Arroyo bridge on the approach road to the monument. General clean-up of the monument has been made. Guide service has been given and will be continued during the ensuing month. Administration is practically current. Fifty hours of labor was received from one youth working under N. Y. A.

Talks Outside of Monument: The Custodian made a talk on Southwestern

National Monuments to the Farmington Lions Club on April 7 with 26 members attending. Ranger Hastings made a talk to the Shiprock Indian School on April 21 with 120 persons attending.

SWM

ORGAN PIPE CACTUS

By William R. Supernaugh, Custodian
Ajo, Arizona

Visitors this month, 1,500; travel year to date, 7,480.

General: After expecting for some time to have a different report on the water problem this month I still have to give the same old story that the well is still without water. Due to breakdowns, funds were used up before the completion of the well now in progress and drilling had to stop at 160 feet. This is estimated to be about 40 feet above water level at the present site. Formations are still very favorable in comparison with wells four miles south on the border and it is still believed that this is a good prospect.

Regional Biologist McDougall returned this month for a ten day period and further study of plants was carried on. Many new specimens were added to the collection.

One week was spent with Dr. A. O. Weese of the University of Oklahoma representing the Ecological Society of America in making an investigation of the monument.

Details holding up the new road were cleared up this month and options on available water for use in the construction were secured.

Time was managed for this month to repair the north boundary fence across washes which had been taken out during the heavy rains. I now have this fence all up at once for the first time in several months as the rains have kept ahead of my time in most cases.

The Customs Collector moved into the new Customs office at the Port of Entry at the Line on April 22 and this will now be a great help to Monument visitors wishing to cross into Mexico, as they may check in and out at the International Line instead of back in Ajo.

Wildlife: On an exploration trip in the Dripping Springs mountains, I located another band of bighorns that I did not know about. From signs and reports there seems to be quite a lot more sheep on the monument than I had supposed.

Flowers continue to bloom and a great many fine displays are still available to visitors. Poppies especially are staging a come-back and new fields can be seen from the road.

Visitors: Visitors to the Monument this month were Hugh and Mrs. Miller, Mr. Johnson of the Water Rights Department with Mrs. Johnson, Roy Arnold, formerly naturalist at Glacier National Park with a group from Los Angeles high schools, and Miss Story, a curator at the Museum of Stanford University.

SWM

SAGUARO

By D. W. Egermayer, Custodian
Route 2, Box 544, Tucson, Ariz.

Visitors this month, 2,222; travel year to date, 11,072.

General: Travel to this monument increased about 200 over that of last month, and almost the same amount over that of April, 1940. This may be partly due to bad weather during March, and partly to the unusual flower display which was to be seen throughout the month at Saguaro.

Weather has been mild, with many clear days (for a change), and a total precipitation of only 1.00 inch, occurring on six different days. Under unusual occurrences might be recorded the fact that the only snow which fell at the monument headquarters all winter came on April 18; just a few flakes, but still snow. Speaking of snow, on April 25 there were still scattered patches on the ground to a depth of two feet near the Rincon Peak Lookout, and one drift, in a deep, north-facing canyon that was some six feet deep. This may not seem unusual to Budlong, but it is to us desert-dwellers.

Administrative: Three pack trips to the Manning Camp Ranger Station were made during the month, nine days being spent "on top". Two additional trips were made on official business, one to the Portal Ranger Station of the Coronado National Forest, to return six mules loaned for our packing, and one to the Lowell Ranger Station to return three more mules and one horse. Several trips to Tucson were made in connection with pre-season fire business. I should like to thank all the Forest Service men who were so kind as to help us out with the loan of pack stock, packing equipment, camping outfit, trucks, horse-trailers, and above all, their time -- this last item of contributed time amounting to 11 man-days, at a season of the year when they are busiest.

Fire-occurrence maps for the Saguaro Fire Atlas for the decade 1940-49 were completed, and mailed to Headquarters.

Under the heading of "Publicity" the fact might be mentioned that Saguaro, with colored photos, "made" the April 26 issue of the Saturday Evening Post, in an article by Drs. Rand and Brass, of the American Museum of Natural History expedition who were here last spring.

Verbal complaints concerning the new directional sign at the junction of Wilmot Road and U. S. Highway 80 continue to come in -- one visitor reported that he had spent five hours looking for the monument.

Maintenance, New Construction, and Improvements: Some 26 man-days of labor were taken to pack the five-and-one-quarter tons of hay and grain to the Manning Camp Ranger Station. Bill Williams, who has been on this job for 18 previous years, and Chester Davis were the two men hired for this work. After this job was completed, Davis and Ralph Cray spent 29 man-days repairing the telephone line, which had been badly damaged by winter storms of unusual severity. This job was completed April 26, and was financed through a grant of \$200.00 from ER and FFF funds -- the first

money spent on this line in ten years. The custodian spent nine days on these two projects, in addition to several days spent getting in mules and equipment, and returning same. A new telephone was installed in the Rincon Tower, weather instruments set up at Manning Camp, and new batteries installed in all three phones on the mountain.

Foreman Mullenau arrived on April 23 to start construction of the section of west boundary fence approved under the Soil and Moisture program; work on this will be completed during the coming month.

The approach road was maintained by the county during the month.

Activities of Other Agencies: On April 4, the Bureau of Plant Industry, of the Department of Agriculture, took over the work on the disease of Saguaro cacti. This work will continue under the direction of Dr. L. S. Gill, Senior Plant Pathologist of the Bureau's Albuquerque office, and the field work is in charge of Mr. Paul Lightle, employed for this purpose. The University of Arizona is continuing its assistance in the program until such time as the field survey here at Saguaro is completed -- probably the first of June. At that time Mr. Lightle plans to move down to Organ Pipe Cactus for some weeks of work there, before returning to this area to continue on his rechecks of the established sample plots.

Interpretation: Of the 2,222 persons counted entering the monument, 435, or 19.5 per cent were contacted at the headquarters station or on the roads. There were 69 picnickers, and one outside talk was given to 260 students at the Roskrige Junior High School. A total of 3,131 minutes were spent in contact work, a large part of this by the custodian's wife, in his frequent absences from the headquarters on other work.

Official Visitors: N. P. S. visitors at the monument during the month included: Associate Engineer (Radio) W. C. Hilgedick, from San Francisco; Associate Engineer R. R. Maxwell, of Santa Fe; Superintendent Miller (who arrived while I was on the mountain), Regional Biologist McDougall, Dr. Gill, of the Bureau of Plant Industry and Paul Lightle, of the same agency; Foreman Mullenau, from Headquarters.

Other visitors worthy of mention included Dr. A. O. Heese, of the University of Oklahoma; Ranger Daniels, of the Coronado National Forest, who made one trip to Manning Camp with the Custodian; Mrs. John J. Raskob, Sr.; Dr. Elliot Porter, of Hubbard Woods, Illinois, who is doing some photography of birds under a fellowship from the Guggenheim Foundation, and expects to spend two months at Saguaro; Mrs. J. K. Weiler, of Seattle, Washington, President of the Pacific Coast section of the Association of Federation Garden Clubs of America.

Protection: Under this heading the facts may be summed up by stating that all preparations have been made for the beginning of the fire season; both lookouts engaged, and the first man will go on duty May 1.

It has been noticed that the area infested with mistletoe, in the pine forest on top of the Rincos, has increased considerably since last August. While the infestation is of considerable proportions and extent, no appreciable damage seems to occur as a result of the infection, and no trees seem to die of it.

Trails at the higher elevations are in a deplorable condition, after ten years in which no maintenance has been possible, due to lack of funds.

Flora and Fauna: Although the custodian has been stationed at this monument for only 18 months, he has visited the area frequently in the past six years; at no time has he encountered anything approaching the floral display which occurred this month -- areas of 10 to 20 acres covered almost solidly with the yellow carpet of the Brittlebush (Encelia), thousands of clumps of pinkish-purple Pentstemon (P. Paryi), areas solidly purple with Phacelia, and many others too numerous to mention, which are only slightly less spectacular. The first of the cacti to bloom each year, the Fendler's Hedgehog, has been flowering all month, and the Prickly Pears have just started to open within the past week, while the first Saguaro bloom was seen April 25, just four days later than last year. Palo Verdes are beginning to leaf out, and will bloom within the next two weeks, and, from present indications, even more amazingly than last year.

One thing has us puzzled -- while all of the herbaceous flowers bloomed from two weeks to two months earlier than last year, some cacti and Palo Verde are actually later, ranging from four days, in the case of the Saguaros, to nearly three weeks in the case of the Hedgehog and Prickly Pear Cacti; yet the Chollas are flowering a whole month earlier than last spring.

Like the flora, the wildlife is present in ever-increasing numbers. Rabbits are more numerous than ever, ground squirrels have litters ranging up to six young, some thrashers have already raised one brood and are nesting the second time -- in short, everything except coyotes seem to be a great deal more abundant than last year, and the latter have almost disappeared overnight, so to speak. The first White-winged Doves to be seen on the monument were recorded April 25, the same date that Saguaro flowers were first noticed; probably no connection, but an interesting coincidence.

SWNM

WALNUT CANYON

By Paul Beaubien, Jr. Archeologist
Flagstaff, Arizona

Visitors this month, 630; travel year to date, 2,623.

Of the 630 visitors, 102 were not contacted, and it is estimated that 65 visited the cliff dwellings unattended. Some were contacted more than once, giving a contact record of 110 per cent.

Park Service visitors were Jimmy Brewer, Dale King and Chuck Richey.

Day after day we have had snow, rain, sleet or hail. There was 12 inches of fresh snow on the ground the Saturday morning before Easter. Even the County snow plow bogged down that day -- just a short distance from where Bill Stevenson was saying his prayers, or whatever it is that Bill says when his car is in the ditch.

I made one trip to Navajo National Monument with Jimmy, in order to return pickup USDI 1250 to headquarters. I spent a couple of days there while Jimmy worked on his pump and collected some clay samples at Inscription House for analysis.

Project Superintendent Stevenson took the pickup to Coolidge from Flagstaff, while I was on sick leave a few days, due to flu. He returned with Walnut's pickup which had been overhauled at Headquarters.

Routine and Continued Projects, and Projects for Ensuing Month: All of the CCC boys have left for Washington, so I should spend most of my time at the Observation Point contacting visitors.

~~SWNM~~

MT. ELDEN CCC

By William Stevenson, Project Supt.
Flagstaff, Arizona

Walnut Canyon: Only five days were lost this month due to storms. However, work was restricted to road construction and maintenance for the greater part of the month.

Company 3,345, Mt. Elden, is being disbanded, effective April 26. All project work was discontinued April 23. A western company is expected to arrive on or before May 1.

Shoulders are being sloped on entrance road and 50 per cent of grading has been completed for parking area.

Custodian's residence is now 100 per cent complete. Work was discontinued again on rail fence April 10 due to muddy roads. Work continued in the rock quarry.

Wupatki: Side Camp was discontinued April 22. Forms are being placed for basement of Administration Building -- sand and gravel is now in place. Work continued in the stone quarry.

National Park Service visitors for the month include: C.A. Richey, Assistant Superintendent; L. Kuehl, Associate Land Architect; Mr. H.A. Montgomery, Associate Engineer; and Dave Christie, Mechanic at Haco Canyon, New Mexico.

~~SWNM~~

TUZIGOOT

By Jack Cotter, Custodian
Clarkdale, Arizona

Visitors this month, 890; travel year to date, 4,175.

The visitor month was not bad from the standpoint of patronage, but at least two hundred expected visitors failed to make the monument due to a disastrous rain Easter Week, which ruined Easter bonnets and attendance.

alike with fine impartiality. And it was pretty tough on our ailing adobe ruins, too.

Special visitors to the monument this month were Engineer H. A. Montgomery from Santa Fe Headquarters, Dale King who peered briefly at Tuzigoot en route to work on the Montezuma Castle museum, and Dr. Edward Spicer, whose visit with six of his students from the University of Arizona proved the source of much useful additional information on Tuzigoot for the benefit of the writer. The Flagstaff contingent from the Museum of Northern Arizona were represented by Al Whiting and Mrs. Whiting and Virgil Hubert.

Tuzigoot played host to the Bridgeport school children who came out "on their own".

Ruins Maintenance and Stabilization: The N. Y. A. contingent, currently augmented to 11 boys, has been hard at work finishing up the last of the scheduled stabilizing jobs. The urgent problem of building adequate and safe paths around the entire south and lower end of the ruins has been met finally, and a considerable section of the old path has been stabilized and steps have been placed on some of the treacherously steep paths. All ruin interiors were cleared of weeds, and the lower ruins, Unit VI, were photographed prior to stabilization, which is scheduled for the next job.

The writer talked to the Foreman's Club of the Clarkdale Smelter during April, representing the most ambitious forensic foray of the month out of Tuzigoot.

-SWM-

CANYON DE CHELLY

By Charles D. Wyatt, Custodian
Chin Lee, Arizona

Visitors this month, 60; travel year to date, 429.

Weather: Weather conditions during the month have been similar to those reported last month; that is, two days out of every week were threatening with a heavy shower somewhere in the vicinity. Spring seems to be here as we have had only four nights with frost. The lowest temperature recorded was 24° and the highest 70°. Precipitation during the month totaled 1.61 inches.

Administration: The multiplex display as worked out by the custodian was OK'd by the Headquarter's Staff and returned for the final drafts and detailed writeups.

Three patrol trips were made into the canyons during the month. Two trips over this part of the reservation were made by the custodian to check mileage for and location of directional signs to be made up at the Chaco CCC Camp.

Thirty herbarium specimens were received, neatly mounted, from the Western Museum Laboratories during the month. This is the beginning of

what we hope to be one of the most nearly complete in the Southwestern National Monuments. Some 20 groups of specimens have been collected this month by the custodian to be sent off for identification.

A 1,500 word article was written during the month for publication in the new magazine "Parks".

The Thunderbird Ranch is really going up town on us out here. During the past month the McSparrons have installed a 10 KW generating unit which puts out 60 cycle 110 volt alternating current. With the new plant in operation they have put in use a frozen foods unit as well as an ice cream counter. New gasoline pumps have been installed closer to the building and hence less conspicuous.

Maintenance: The truck trail from the Ft. Defiance road to the head of Bat Trail was worked on during the month. This included digging off the high centers, grubbing stumps, and removing boulders. This work will enable visitors to drive with safety to the head of the Bat Trail.

Another road, the old wood road out to Spider Rock Overlook, was given the same treatment. With this improvement it will be possible to drive within 2000 feet of the rim above Spider Rock. The writer predicts that this road will be much used during the summer as it leads to an awe-inspiring view.

The Fort Defiance approach road was dragged during the month on a guess that the rains were about over. Bad guess!

Use of the Monument Facilities by the Public: Visitors: 1941 -- 60; 1940--206; 1939 -- 182.

Although the visitor count this month lacks a lot to equal other years, it is so much greater than last month that it is really cheering. The 60 came in 17 parties with the contact time totaling 3,060 minutes or about three hours for each group. One party of eight was the remnants of the California Sierra Club tour. These people were given a workout by making the Bat, and White House trails.

Routine and Continuing Projects: Work on the multiplex display will be finished during the coming month, and the usual maintenance and contact work continued. Signs will be made to guide visitors to the Bat Trail and Spider Rock Overlook, and to White House. These will be patterned after those displayed by Davey Jones at the Custodians Meeting.

SWM

CAPULIN MOUNTAIN

By Homer J. Farr, Custodian
Capulin, New Mexico

Visitors this month, 600; travel year to date, 6,650.

Travel shows a considerable decrease and I am charging it altogether to the weather. No Park Service officials and no notable visitors, that

I recognized, came in.

Weather has been a continuance of the bad winter and, while it has tapered off some as regards cold temperature, we have had rain, rain, and more rain, and the fore part of this month we had plenty of snow. All together there has been between three and four inches of precipitation this month.

Maintenance: Maintenance has been heavy this month. The snow and rain has been a burden on the keeperupper of the road, however, the road at the present time is in very good condition, or at least was daybefore yesterday, but we have had at least $1\frac{1}{2}$ inches of rain in the last 24 hours and right now I am unable to get to the monument. There may be some wash-outs. This I hope to check tomorrow.

Routine and Continuing Projects: The road was kept dragged well during the month, all signs were repainted, a small amount of the stone wall was rebuilt, and the heads of several culverts were reopened.

Wild Life: Considerable damage has been done this month to the trees by the porcupines. Our deer are much wilder, have scattered out over the lower country around the foot of the volcano, and I seldom see them. This runs true to form and is the case every year. On the very last day of March, I saw three very fine large bucks in the road just in front of the car. This was unusual. Throughout the month of March I saw many does almost every day, but this is the first good look at bucks I have had.

Projects Through the Coming Month: Will be to install three new latrines, reset at least two culverts deeper under the road, and make a general maintenance of the road and trails if I can possible get this much done.

General: Easter services were held at the picnic area on Easter Sunday. Only a small group attended on account of the extra cool weather, just about 60 people. Tonight a new tourist bureau is being formed in Raton by the business men of that city. I am asked over to make a short talk on the monument here. I have prepared a short talk like that I often give to visitors.

SWNM

NAVAJO

By James W. Brower, Custodian
Tonalea, Arizona

Visitors since last report, 91; travel year to date, 133.

Travel Date: February -- snowbound, no travel. March -- one party guided by John Wetherill and Shine Smith; total in party, 5 people in 2 cars; April -- visitors this month 86 in 29 cars; total this travel year, 133

visitors in 46 cars.

Organized Groups: The Sierra Club of California visited Inscription House on April 7 with 63 members making the ruin trip. Through the cooperation of Tony Richardson (Inscription House Trading Post) we were able to get eight Navajos to sing and dance at the camp-fire session on the evening of April 6.

The California Studios Productions took still pictures of Betatakin and Keet Seel. The photos are to be used in making a ruin movie set in hollywood for "Secret of the Wastelands" starring Bill Boyd.

National Park Service Visitors: Hosteen John Wetherill, Custodian Retired, visited the monument in March and again in April; Hosteen John can wrangle a party and string of pack stock the same as of old.

Paul Beaubien, Custodian of Walnut Canyon, came out with us on the 27th and returned USDI 1250 to Flagstaff.

Landscape Architect V. Schulmen and Leader Rudy Rueter of MM-5-A took their Sunday off to bring us a load of hay and grain and to show us the proper handling in transplanting native shrubs.

Publicity: An illustrated manuscript was prepared for the Arizona Highways Magazine and submitted through Headquarters.

Weather: Cloudy weather has predominated. Snow fell on six days for a total of 12 inches (1.18 inches precipitation); maximum temperature, 58; minimum, 15. One snowfall prevented a party of six from leaving the monument; beds were made all over the house and in the basement; Sal. got a week's cooking in in two days and had the visitors wiping dishes.

Maintenance and Improvements: We made a special trip to Inscription House for sand samples which have been forwarded to the Washington Office for cement formula. Paul helped us remove the solenoid valve on the 29th and photographed Inscription House on the 30th as we collected the sand samples. This was Paul's first trip to Inscription House and I think the only reason we were able to get him there was because we could use the new auto road into the canyon; (after he saw Inscription House his interest in Keet Seel perked up in spite of no road).

Much raking and general cleanup was done, two roadside directional signs were replaced, and the 15-mile fork of the approach road from Kayenta was dragged twice to cut down the high centers. (We personally purchased two old Chevrolet axles and Oscar Rueter and Ray, the blacksmith, helped us bolt railroad ties across them--the assembly makes a fine road drag. Thanks boys.)

New food storage shelves were placed over the basement stairs reaching to the ceiling.

The logsidings job on the contact station was completed except for the door.

Ensuing Projects in the Order of Their Importance: No. 1 -- Get the water system working. The plan, as presented to Chuck, is to pull the pump and

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motor out of the wet end of the tunnel; build a three-foot bulkhead across the tunnel just inside the door, and mount the pump and a waterproof motor on the bulkhead. This greatly increases the capacity of the sump by including the bottom three feet of the tunnel, puts the motor in a dry location, and eliminates the dangerous and unsanitary practice of entering the length of the tunnel for maintenance.

No. 2 -- Fence the "yard" and keep the horse out of the house.

No. 3 -- Stain, with a harmonizing color and protective coat, the contact station; construct register stand, and water facilities.

No. 4 -- Prepare pits and pit linings for two toilets now under construction at NM-5-A.

No. 5 -- Prepare two campsites and install picnic tables and fire grates now under construction at NM-5-A.

Last but not least is the much-talked-about fence at Keet Seel which has gone from bad to worse; the barrier across the north bank of the wash has fallen away with the sloughing of the bank; a temporary "rustic" fence has been set up. The proper fencing of Keet Seel should be our first Antiquities project after July 1.

General: We had a grand time on our leave and the high spot was our first visit to Organ Pipe; Bill showed us a great Monument doing its best to entertain us -- and Bill doesn't take a back seat there, either

SWM

MONTEZUMA CASTLE

By Earl Jackson, Custodian
Camp Verde, Arizona

Visitors this month, 929; travel year to date, 3,431.

Three-hundred-forty-two tickets were sold, and one annual pass issued, 118 minors entered the Castle free as under age, and two persons were admitted on complimentary passes. A total of 460 persons entered the Castle. Visitors arrived in 260 cars of which 75 were Arizona cars. Twenty-nine states and Hawaii were represented, as well as five foreign countries -- China, Denmark, England, Russia, and France.

Two persons arrived on horseback and five on bicycles. Special groups of visitors included 18 enrollees from a Prescott CCC camp, 16 enrollees from a Mayer CCC camp, 11 geology students from Redlands University, Redlands, California; 21 students of the Clemenceau Junior High School, Clemenceau, Arizona; 31 students of Reedley Junior College, Reedley, California.

On March 26 H. D. Starrett, of the Museum Division, en route to a Junior Naturalist post at Boulder Dam, was a visitor. On April 1 Associate Engineer R. R. Maxwell of the Regional Office was in for an hour. On April 8 Park Archeologist King, of S. W. National Monuments, arrived to work on museum installation. April 14 brought Associate Engineer Montgomery of the Regional Office.

Other visitors of the month included, on April 7, Fred G. Steenberg.

of Fond du Lac, Wisconsin, an ardent booster for Montezuma Castle. April 22 brought G. K. Greening, State Meteorologist for Arizona.

Weather and Roads: The month has been quite wet, with 3.48 inches of precipitation. During the night of April 11, an unseasonal snow storm of about three inches hit this area, and did considerable damage, breaking sap-laden limbs of trees, crushing flat our beautiful blanket of wild flowers, and precipitating a late freeze which did harm to fruit orchards and gardens throughout the valley. Nine days were cloudy and six partly cloudy. Maximum temperature was 78, minimum was 25.

Roads of the near vicinity have been in pretty fair condition most of the month. W. P. A. road construction on a short of the main approach near McGuireville, three miles away, is finished now except for gravel surfacing preliminary to eventual oil coating. The storm which accompanied the snow fall caused minor rock slides on Highway 79 in Oak Creek Canyon, and a large slide on Highway 79 between Jerome and Prescott. This latter blocked traffic for a couple of days. The approach from Roosevelt Dam via Payson and Pine has been rather rough. No travel is reported yet from the Lakes route, which probably won't carry much travel until the middle of May.

Routine and Continuing Projects: Maintenance was kept current. The phenomenal growth of weeds following our wet winter required a great deal of weed cutting. Keeping our trails open through the loop into the lower ruins was like cutting through tropical jungle -- almost. The trail leading from the checking station to the Castle cliff was repaired after storm damage from cutting. During the month Ranger Baczuk was sent out to check on some needed signs at major highway intersections.

At the point where our entrance road takes off from the county road our entrance wye was graded and brought down into good shape, thanks to the cooperation of the local W. P. A. road construction crew. At this same spot, a telephone pole of the Mountain States Tel. and Tel. Company was removed from the center of the wye and moved to a less conspicuous spot.

At the spot where the power line of the Arizona Power Corporation joins the underground Park Service power conduit, we had installation of an extra lightning arrester and a more adequate set of ground wires made, so that overcharge from summer electrical storms will not cause shorting out on our power.

Construction Projects: On March 29 the gutter construction job on a long hill of our entrance road was completed.

On April 8 Park Archeologist Dale King arrived to start re-vamping our museum. The task was to remove all the makeshift exhibit cases (old book cases) and to replace them with modern deep cases with plate glass fronts in extruded aluminum frames. After placement of the new cases remained the main task of furring in the spaces between them, so as to convey an impression of built-in cases in a room which was not designed for them. The work necessitated closing the museum to visitors, which was done on April 15. To date work has progressed satisfactorily, with most of the furring-in done. There is much finishing work to be done yet, and finally

MONTEZUMA CASTLE (Continued)

the placement and arrangement of the exhibits. The work has been done by Dale King and the ranger and myself, under Dale's directions. Much of our assistance has been of a rather spotted nature, since there are so many interruptions necessary in order to maintain adequate service to the visitors.

Education: During the month the custodian prepared a long article on Montezuma Castle, which was submitted for use in the May issue of the Arizona Highways Magazine.

On April 22 the custodian delivered to the Camp Verde High School a 45-minute talk on the Gambel's Quail, stressing conservation principles.

Personnel: One half day of sick leave was taken by Ranger Baczuk during the month.

Proposed work to be done in May: In addition to taking care of an expected heavy visitor attendance, we plan to do the following:

Keep maintenance up; clean out some culverts which have slight stoppage as result of heavy rains; finish, with Dale King, the museum installation; and clean out our septic tank. A good part of the custodian's time will be taken in doing office work and other aids on beginning the construction of the boundary fencing job. While the job will be done by a competent foreman, experience teaches that foremen need some assistance from the office end.

General: The country is in fine shape, visitor travel is increasing, numerous picnickers are enjoying themselves here, and we have had an unusually interested bunch of Castle visitors this month. The ruins are in good condition, and we feel that the monument can tick along okay into the summer.

SWNM

MONTEZUMA CASTLE MUSEUM

By Dale S. King, Archeologist

Progress as follows was made on the improvement of Montezuma Castle museum: old cases dismantled and removed; fireplace mantle and obstructions in room removed; fenestration masked; exhibit rooms re-wired with standard BX cable and knockout boxes and flush outlets; lumber and supplies obtained from Mount Elden CCC camp; building wall out and framed for cooler duct; cooler stand and duct built and cooler installed and wired; six new cases moved in, leveled and plumbed; studding and furring completed on five cases and studding finished on the sixth; fluorescent lighting unit hooked up and installed in case number 1. All wiring, including switches, completed. For this last item we are greatly indebted to operator Norman Jackson who generously donated much skilled time and effort. Our sincere thanks are also due to Project Superintendent William Stevenson of the Mount Elden camp,

who aided the project much by his cooperation. Custodian Jackson and Ranger Baczuk have worked efficiently and faithfully -- all in all the job is going well.

SWNM

BANDELIER

By C. A. Thomas, Custodian
Box 669, Santa Fe, New Mexico

Visitors this month, 535; travel year to date, 1,894.

Weather has been cold, rainy, and windy. Spring is far behind with no flowers; no foliage on the trees. Roads have been good at times, but rain has made them muddy and rough. Travel is reported to have been heavy in Santa Fe and Taos, but the tourists seem to be very reluctant to leave the paved roads when the weather is threatening. What should have been a record month for April dwindled to 535 visitors -- 200 less than for the same period last year.

Personnel: A. D. McGillivray, maintenance man, resigned at the end of his leave period March 31 to accept a position in the Post Office Department in Santa Fe. Ranger Eden has been loaned to the CCC to facilitate the finishing of Residence Number Four and additions to Residences Numbers Four and Two. The results have been that Bandelier has been a one-man monument for the past two months. Camp NP-4-N is scheduled to be terminated June 30 with the consequent pressure to finish up going jobs and squeeze in other badly needed projects where we still have the means.

Plans have been approved for the improvement of the sewage disposal system and the building of a spray disposal plant.

Damage to prehistoric structures during the past rainy, wet winter has been severe. Threatening Rock destroyed a lot of walls in one crack, but I dare say that if the destruction of this last winter were concentrated on one ruin in Bandelier, it would make Threatening Rock look like a piker.

Invitations were mimeographed and sent to approximately 500 schools of the state, urging them to visit Bandelier during the coming year. Silk screen posters were received from the Western Museum Laboratories and distribution is being made to chambers of commerce in near-by towns. Colored films of Bandelier National Monument were loaned to parties in St. Louis and in New York City. Reports are that the films were shown to more than 300 people in St. Louis and were shown three times in New York City where more than 500 people saw them.

Accessions: In addition to 100 silk screen posters, Western Museum Laboratories furnished us 50 re-print holders, 31 museum labels, and 6-5 x 8 card file boxes. Thirty-eight volumes for library were received from Headquarters. An office desk and chair and a bookcase were transferred from Region III to Bandelier. An electric refrigerator unit was received from the Mare Island Navy Yard. Ford sedan USDI 1437 was transferred temporarily

from the Region and was picked up by Custodian Bicknell. A 3-KW Delco Light Plant was transferred from Bandelier to Casa Grande.

Fencing Projects: Approval was received last month and funds allocated for constructing a long-talked-of fence on the south three-and-three-quarters miles of boundary. Most materials were already on hand at Bandelier, others were purchased and arrangements made to start this project. Surveyors from Region III started the job of surveying the boundary on April 17. One foreman, one truck driver, and six men were hired and actual construction work started on April 21. As it is more than 100 miles around by Santa Fe to the south boundary, it is some little task to supervise this project from headquarters.

The Koshari Club -- girls' organization from Texas Technological College, Lubbock, Texas -- made their annual pilgrimage to the monument April 12. This organization of coeds is organized around events described by Adolph Bandelier in his novel "The Delight Makers". The Club was organized years ago by a few girls interested in history. It has increased in popularity until now a bid to membership is the most coveted social honor a coed at the "Texas Tech" can receive. Sixty-five strong, the girls have made an initiation trip to Frijoles Canyon on Good Friday for the past ten years.

Museum work had to be brought to a close this month because of exhaustion of funds. One more shipment of labels from Western Museum Laboratories will finish the work for this season. Several cases are still empty.

Correspondence was carried on to initiate a program of replacing beaver in several streams in the monument. Recent policy changes in fish stocking necessitated changes of plans in stocking streams in the monument this season. Word is being awaited as to what we might do under the new Fish and Wildlife set-up.

Heavy snows in the mountains have caused Frijoles Creek to run high for two months. Severe floods were feared, but the unseasonable cold weather has kept the snow from melting but slowly and allayed the danger. A great deal of silt in the stream caused complete stoppage of our intake filter bed and also caused stoppage of the water lines. Several days were spent without water and considerable work had to be done to get the system to functioning again.

Finishing touches were put on the new fire lookout, but no funds are available for the purchase of stoves, beds, and lights to make the lookout habitable for 24-hour occupancy as planned. Funds are not even available to hire a lookout, so we'll have to get by the worst of the fire season by dependence on the Forest Service for what help they can give us. A map was received and the Osborn Fire Finder installed. The fire-weather danger station has been moved close to the lookout so that the one man can attend to both stations. Ranger Eden tested all fire extinguishers and inspected all buildings for fire hazards.

Washington office officials expressed some concern about insect conditions in Bandelier Forests. Region III Forester Saari inspected the monument April 12 and pronounced conditions good. He stated that no con-

trol measures were indicated at the present time.

Frijoles Canyon Lodge opened on a limited basis April 15. Numerous complaints were registered prior to that time because of people driving out from Santa Fe expecting to get meals and then having to return to Santa Fe. The situation was made all the more acute by Santa Fe people telling visitors they could get meals and lodging. The main dining room and lobby will not be opened until June 1 or 10. An agreement was reached with the State Highway Department whereby they have promised to make and place directional and distance signs for Bandelier.

All night was spent April 11 searching for two Junior high school boys lost in the canyon between Frijoles Canyon and the Otowi section of the monument. The boys became separated from a picnic group about 3 P. M. and were not found by the custodian until 2 A. M. the following morning. Custodian spent the remainder of that night searching for two groups of searchers who had become lost in the night. They had realized that they were lost and had stopped and lighted fires -- hence were easily located.

Noteworthy visitors for the month were: Engineer Montgomery, Landscape Architect Call, Architect Bennett, Special Assistant McClatchy, Regional Forester Saari, Inspector Higgins, and Engineer Andy Clark, all from Region III headquarters in Santa Fe. Custodian and Bina Bicknell came to the monument on April 13, were shown our layout and ruins, and transferred USDI 1437 and a 3-KW light plant back to Coolidge with them. Superintendent Miller and Christine were with us for a short visit April 14. Custodian Toulouse of Gran Quivira National Monument spent a day in the canyon taking pictures during the month. Attorney Johnson of the Water Right Division out of San Francisco visited the monument during April.

Routine and Continuing Projects: In addition to time spent guiding and contacting people at headquarters, several days were spent on the files and in routine office correspondence. Ranger Eden's crew continued during the month on the maintenance of building projects. As this has been almost a one-man monument during the month, the custodian has been obliged to haul coal, garbage, and wood, perform janitorial services for the buildings, police the grounds, and patrol the Otowi section. Considerable time was spent in organizing the crew for building the south boundary fence. One trip to Santa Fe was made in order to straighten up certain points regarding the Forest Protection Plan in the new Master Plan. Trips were also made to Santa Fe and to Albuquerque in connection with the fencing project. Some road work was attempted and the two light plants were kept in running order.

Projects for the Ensuing Month: During the coming month a great deal of time will be spent on the project of planning and outlining trail talks for temporary rangers who will come on duty before long. As most of this year's rangers will be new to this area, it is felt that if a mimeographed outline of our trails talks can be placed in the hands of each, a more accurate story will be at their command in a shorter time. Several campfire lectures are also being prepared for use during the coming season. Some work will be attempted on straightening out the Bandelier photographic file. The fence project on the south boundary will continue during the

month and will require a good deal of attention. Better weather will mean an influx of visitors who must be cared for. Ranger Eden will continue his maintainance all through May. No doubt other little jobs will crop up to keep time from hanging heavy on our hands.

SWIM

CHACO CANYON

By Lewis T. McKinney, Custodian
Chaco Canyon, New Mexico

Visitors for the month, 73; travel year to date, 266.

General: Things have been going quite well in the Chaco this month but Old Man Winter seems to keep hanging on. The grass and other vegetation is beginning to green up a bit, but will probably be several days before things are green enough to look like spring again.

Service Visitors: Engineer Maxwell and Mr. Balch spent several days in Chaco this month on Soil and Moisture work. Balch and the CCC boys planted some 30,000 new trees in the Chaco Wash. This I believe makes a total of 369,000 trees that have been planted in the monument since mytime here.

We must have some sort of contagious disease here in the Chaco, that the Coolidge office is afraid of. We haven't scen anything of them in months and months.

Stabilization: The CCC Mobil^e Unit continues with stabilization of Pueblo Bonito. More damage from this unusually wet winter is showing up all of the time. The repair work on the walls of Pueblo Bonito, where they were damaged by the fall of Threatening Rock, is advancing very nicely. Subforeman, Chuck Turner, really keeps the "navvies" on the move.

Maintenance: We have spent considerable time blading the approach roads but as we continue to work it continues to rain enough so that our work is to be done over again. The roof of the custodian's residence has been repaired twice this month already, but still leaks as usual.

Routine and Continuing Projects: Continuous horse-back patrol has been carried on through the month, three water gaps have been replaced and the fence repaired in several places. I hope we can secure the proposed electric fences and get them installed before the heavy summer rains.

Radio contact has been carried on daily between Chaco and El Morro National Monument. Bud's receiver is working swell again since I secured and mailed him a new tube.

I've been waiting for word from the Coolidge office in regards to drilling the proposed well. As soon as this is OK'd, I'm sure we can secure a rig and driller within a short time.

Equipment: My pickup continues to labor up and down the road as though it

needed a strong tonic and a rest after the hard winter it has gone through. The dump truck continues to run but not in the best of shape. The old light plant is still ticking even though it needs readjusting every day or so. The water pump is still percolating fairly well but we're wondering if it will last through tomorrow.

Signs: The combination signs for Chaco, Aztec, El Morro, and de Chelly are still to be made. I haven't had the time to get out and secure the mileage for these signs. We still have four of the Chaco Canyon road signs to set on the north approach road. The two monument entrance signs are both set.

Publicity: We are securing considerable publicity and inquiries since the falling of Threatening Rock. So far, most of the visitors think the rock should be left as is. We have constructed a temporary trail up through this pile of rock to show the visitors the amount that fell. We can also continue taking our parties clear around the ruins as we always have.

Roads: Both approach roads are passable most of the time except the sand hill four miles north of the monument. At present this sandhill is worse than it ever has been.

Miscellaneous: Herman Phelps, we believe, has been married for several weeks but he only brought out cigars a few days ago. The new bride and her sister plan to spend the weekend in the Chaco.

The local ladies continue to hold their sewing club each Thursday afternoon. They are the most loyal club members I have ever seen.

SWNM

TUMACACORI

By Louis R. Caywood, Custodian
Box 797, Nogales, Arizona

Visitors this month, 1,174; travel year to date, 6,182.

Weather: On the whole the month of April was pleasant. There were a few days of bad winds and a little rain. On the morning of April 12, the mountains were covered to their bases with snow which had fallen during the night. Toward the end of April the temperature rose considerable.

Visitors: A total of 1,174 visitors went through the mission and museum in 259 parties. These visitors came to the monument in 410 cars and 293 of them were from Arizona. An additional 398 persons in 98 cars drove into the parking area and used the monument facilities.

Mr. and Mrs. Fred G. Steenberg of Fond du Lac, Wisconsin, were visitors on April 22. Mr. Steenberg visited Montezuma Castle in 1894 and wrote an interesting account of the ruins at that time which appeared in the November, 1937 Supplement.

Park Service Visitors: Frank Fish, Custodian Chiricahua National Monument, and party were here April 8. Sorry to have missed him; it was this custodian's day off. Naturalist Robert R. Rose, Boulder Dam Recreational Area, Regional Historian Aubrey Neasham, Santa Fe, were visitors April 18.

Museum: Associate Radio Engineer W. C. Hilgedick, arrived at Tumacacori on April 7 to repair the electrical map. A thorough overhaul of the map was made and by noon on April 10, the map in working order, Mr. Hilgedick left. Since that time the solenoid which controls the index arm has failed and the map is again not in working order.

The mass diorama was inspected by Mr. Hilgedick and several suggestions for its maintenance were made.

Holy Week: Easter Week was observed in the usual manner by the local Mexicans beginning Wednesday, April 9, at 8:00 P. M., with a Rosary Service in the Church. A newspaper write-up with pictures on this year's ceremony appeared in the Sunday morning edition of the Tucson Daily Star on April 20. The article was written by Emily Brown from information received from Walter Miescher, an observer during the ceremonies.

Extension Service: An illustrated talk was given before the Nogales Rotary Club on April 11 by the custodian, on the National Monuments of the Southwest. Two reels of movies borrowed from Headquarters were used. Another reel showing some of the Easter week processions at Tumacacori was also shown. A group of 28 members and guests were present. On the night of April 14, these three reels were shown on the wall of the museum building for the benefit of the local Mexicans -- 140 attending. The museum was opened by the custodian for half hour before the movies were shown. These reels were used again by the custodian on the night of April 15 when they were viewed by 23 guests at the Kenyon Ranch. This guest ranch is located $2\frac{1}{2}$ miles from the monument.

Signs: Five signs were picked up at the N. Y. A. shops in Tucson for use on the highway adjacent to the monument. They are made of redwood in the shape of Thunderbirds. One is a historic marker giving a brief history of the monument. Four are directional markers.

A series of these signs are being made for other National Monuments in Arizona. Those for Wupatki and Pipe Springs are now under construction.

Routine and Continuing Projects: The weeds are growing at a great rate and are continually being cut and removed.

The service road gate which has been finished for several months was tightened and two additional iron strap bands were placed on the upright posts which have checked badly. It is hoped to be able to place this gate during May, if it can be handled by the custodian and ranger.

Office work, janitor work, and ground work have been kept up as usual by the custodian and ranger.

CHACO CANYON

CCC

By Herman Phelps, Proj. Supt.
Chaco Canyon, New Mexico

Work is progressing very slowly this month. All but about 60 boys terminated their enrollment and departed for home, also, most of the foremen took annual leave. Up to date, our company strength is 137.

During the month we were visited by Mr. Balch, Junior Forester; Mr. Maxwell, Regional Soil Conservationist; Mr. Higgins, CCC Inspector, New Mexico; Mr. Bradley, Engineer; Mr. LaVergne, Auditor, Region III and Mr. Gastellum of the Collidge office.

Work has been done on the following projects: Guide and Contact, General Cleanup, Boundary Fence, Maintenance of Roads, Maps and Models, Entrance Road, Section "C" and Proposed Headquarters Road.

SWM

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* ARNO B. CAMMERER *

* * * * *

* We are saddened by the death of former director Arno B. *
* Cammerer who passed from an active life on April 30, 1940. *
* Flags at all Southwestern National Monuments were flown at *
* half mast from noon Friday, May 2, to sundown Saturday. *

* Cam's generous spirit and fine human sympathy endeared him *
* to all who knew him. It is trite to say that we shall miss *
* him, but we shall miss him in a very true and poignant sense. *
* Every meeting with him cheered and heartened us. *

* Goodbye, Cam! We loved you and won't forget you. *

* * * * *

*****SWM*****

HEADQUARTERS

INTERPRETERS' REPORT

By Dale S. King, Archeologist
Coolidge, Arizona

PERSONNEL

Archeologist King spent the first week of April at Headquarters completing routine duties and clearing his desk preparatory to leaving for Montezuma Castle National Monument. He left office on April 7 and has been engaged during the entire month with the preparation and installation of museum cases and exhibits at Montezuma Castle, and in making plans for displays at Walnut Canyon National Monument.

Archeologist Steen prepared copy for a sixteen-page informational leaflet on Casa Grande National Monument, edited a manuscript on Navajo National Monument for possible publication in Arizona Highways magazine, and supervised ruins stabilization work on Casa Grande National Monument; specifically backfilling ruins on Compounds F and E.

Naturalist Dodge spent the entire month in the office compiling the Superintendent's monthly report, preparing copy for the two-fold informational leaflet on Saguaro National Monument, writing an article on White Sands National Monument for the magazine "Parks" and carrying on routine duties of the office.

110 - NEW OR UNUSUAL ACTIVITIES

The article for the magazine "Parks" was prepared on White Sands National Monument, and one written by Custodian Wyatt on Canyon de Chelly was edited. Both were forwarded to the Director.

412 - PUBLIC RELATIONS - PUBLICITY

The magazine "Arizona Highways" published in its March issue a well illustrated article on Casa Grande National Monument. In the April issue of the same magazine a similar article on Organ Pipe Cactus National Monument was published. Stencils were prepared and forwarded to the Western Museum Laboratories for the preparation of mimeographed informational leaflets for a number of the monuments. Shortage of mimeograph paper seriously curtailed this project. The usual number of requests for information were answered.

413 - EXTENSION SERVICES

Approximately 75 people were contacted in illustrated talks, one to the Florence Junior Womens Club on the work of the park naturalist, on March 31, and one to a group of Indian school children from the Pima Reservation regarding the National Monuments of Arizona, on April 1. A total of 164 letters was written.

421 - PROGRESS OF EXHIBITS PLAN PROJECTS

A number of specimens of commercial gypsum products were requested from the American Gypsum Company for display at White Sands National Monument. This is a start towards filling the two unoccupied cases in the White Sands Museum. Archeologist King spent the greater part of the month at Montezuma Castle and Walnut Canyon National Monuments planning and installing displays (see report on page 216).

430 - STAFF RESEARCH AND OBSERVATION

Archeologist Steen practically completed work on the Tonto collections and the report of ruins stabilization at that monument. A number of nestling phoebes, morning doves, and owls were banded during the month.

440 - COOPERATIVE RESEARCH

Aid was rendered Dr. A. O. Weese making an ecological study of Organ Pipe Cactus National Monument. Two snake specimens, one from Tonto and one from Casa Grande, were sent to The Chicago Academy of Sciences for identifications. Both were new records for the respective monuments; Tonto, Arizona Ring-neck Snake, Diadophis regalis arizonae; from Casa Grande, Sharp-nosed Snake, Rhinocheilus lecontei. Fifty-four flower specimens collected by Seasonal Ranger Francis Elmore on Casa Grande National Monument were forwarded to the University of Arizona for identification.

450 - SWNM LOAN LIBRARY

This long neglected but important project came to life on April 22 through the greatly appreciated assistance of the Arizona State Wide Library Project, W. P. A. On that date librarian Maria Monreal started preliminary work on the library and 100 books were sent to the Tempe Headquarters of the project for cataloguing and accessioning. Nine books, 45 periodicals, 50 pamphlets, and 10 reports were received this month.

460 - SOUTHWESTERN MONUMENTS ASSOCIATION

The association's annual report was completed, mimeographed, and mailed out. The association sponsored the SWNM library project outlined in the preceding paragraph of this report.

470 - PHOTOGRAPHY AND OTHER VISUAL AIDS

Through the valued assistance of the Washington office in providing films, and the Region III office in loaning a camera, it was possible to take a number of color pictures of the exceptionally fine floral display along the Apache Trail and on Tonto National Monument. At the time photographs of Tonto Ruins were taken to replace unsatisfactory pictures submitted with the Tonto two-fold informational leaflet copy. Naturalist Dodge took annual leave to take these photographs, and was accompanied by seasonal ranger Francis Elmore of Casa Grande National Monument who made a number of flower photographs for the Casa Grande slide library.

A Headquarters projector and reel of motion pictures, "Glimpses of the New Mexico National Monuments" were sent to Bandelier National Monument to be used at campfire talks throughout the coming travel season.

520 - NEWSWORTHY VISITORS

National Park Service officials were Headquarters visitors: Bill Supernaugh, J. Kieley, A. E. Underhill, Don Eggermayer, C. Krueger, Jules LaVergne, Bob Rose, O. G. Taylor, H. A. Montgomery. Pasqual and Legoria Tafoya and Miss Pablita Velarde, potter and artist of the Santa Clara Pueblo in New Mexico, were Headquarters visitors.

STATUS OF ARCHEOLOGICAL PROJECTS

Backfilling of ruins at Compounds F and E of Casa Grande National Monument under the supervision of Archeologist Charlie Steen were three-quarters completed as the report month ended.

COMPLETED PROJECTS

Compiling and processing the Superintendent's monthly report was completed as usual, articles for "Parks" on White Sands and Canyon de Chelly National Monuments were finished and manuscripts with photographs were submitted to the Washington office. Manuscripts for a two-fold informational leaflet on Saguaro National Monument and a sixteen-page informational folder on Casa Grande National Monument were finished and submitted. Installation of museum cases at Montezuma Castle National Monument were practically finished.

PROJECTS FOR ENSUING MONTH

Archeologist King will complete installing exhibits at Montezuma Castle National Monument and will finish preliminary exhibit plans for Walnut Canyon National Monument following which he plans a trip to Gran Quivira, Chaco, and Aztec to check over ruins stabilization plans. Following that he will return to the office to carry on routine activities and supervise the W. P. A. library project. Archeologist Steen will finish the backfilling ruins stabilization project at Casa Grande National Monument, and then will go to Canyon de Chelly for a ruins stabilization project there. Naturalist Dodge will compile and process the Superintendent's monthly report, carry on office routine, and continue work on museum plans for the two unfinished cases at White Sands National Monument, the orientation station and the Headquarters exhibit room at Chiricahua National Monument, and the prospectus for Arches National Monument.

ACTIVITIES OF ARCHEOLOGIST

Archeologist King visited Boulder Dam for the first time March 29-31 by driving J.F.Kieley of the Washington office to Boulder City.

During the month, King edited copy for the Casa Grande 16-page booklet, issued another Region III anthropological note by Regional Archeologist Erik Reed, on kivas; assembled and collated ruins stabilization reports for Chaco Canyon, Bandelier, and Montezuma Castle; and had an interesting conference with the representative of a publishing company which may prove to be very helpful in Southwestern Monuments Association affairs.

A resume' of Archeologist King's activities at Montezuma Castle follows the monthly report from Montezuma Castle under the heading "Montezuma Castle Museum", on page 216 of this report.

MONTHLY STATISTICAL REPORT OF INTERPRETATIONAL CONTACTS

STATION	Personnel		Guided Trips		Lectures		Attended Stations		Unattended Stations		Visitor Participn. HOURS	Total Contacts	Total Visitors
	Pcr.	Tem.	No.	Att.	No.	Att.	No.	Att.	No.	Att.			
Arches	1	0	21	198	1	35					121	233	461
Capulin Mountain	1	0	1	60			1	140			240	200	600
Chiricahua	1	0	6	105	59	225					232	330	1,283
Natural Bridges	1	0											0
Organ Pipe Cactus	1	0	2	4			1	30			33	34	1,500
Rainbow Bridge	0	0											0
Saguaro	1	0			1	260	1	435			425	695	2,222
Sunset Crater	0	0							1	284	67	293	568
White Sands	3	0											10,630
Total Bio.-Geo.	9	0	30	367	61	520	3	605	1	284	1,118	1,785	17,264
Aztec Ruins	2	0	71	497	73	468						965	565
Bandelier	2	0	85	405	1	24						878	535
Canyon de Chelly	1	0	19	64	15	54						118	60
Casa Grande	2	1	24	1,968	199	1,517			1	719		3,485	2,424
Chaco Canyon	1	0											73
El Morro	1	0	1	4	1	4						8	4
Gila Cliff Dwell.	0	0											0
Gran Quivira	1	0	37	216								190	216
Hovenweep	0	0											0
Montezuma Castle	2	0	148	668	54	332			1	235		900	929
Navajo	1	0	10	86								86	91
Pipe Spring	1	0	14	46	14	46						46	46
Tonto	1	0	168	795	75	313						1,108	1,820
Tumacacori	2	0	252	1,168	259	1,174						2,342	1,174
Tuzigoot	1	0	269	810	276	864						1,674	890
Walnut Canyon	1	200	50	155	4	13	1	528	2	167		336	630
Wupatki	1	100	43	122			1	200				522	261
Yucca House	0	0											0
TOTAL, Arch-Hist.	20	4	1381	7,048	1055	5,190	3	752	4	1,121		12,818	9,738
TOTAL ALL AREAS	29	4	1411	7,415	1116	5,710	6	1,357	5	1,405		14,603	27,002
LAST MONTH	28	6	1161	5,572	1108	5,396	162	772	50	5,400		15,976	16,014
LAST YEAR	25	12	1742	10560	1450	6,705						17,235	20,952
Scientific Areas													
Archeological and Historical Areas													
Totals													

BRANCH OF MAINTENANCE

By F. E. Stonehocker, Gen. Mechanic
Coolidge, Arizona

In addition to the regular servicing of cars and trucks as usual -- all cars at Headquarters were washed, greased, waxed, and given a general once over. This additional service was made possible by the help of four N. Y. A. boys who have their time completed for this period.

Two paint jobs were done, USDI 1250 and USDI 2950, both Ford pick-ups to be used for relief rangers Alberts and Mahan. A trailer hitch was made and installed on USDI 1250 for Mahan.

All doors and window frames in the utility compound were given a fresh coat of paint. A hose reel for fire hose was constructed from waste materials, and now awaits a coat of paint before being put into service.

It was found necessary to install a set of connecting rod bearings and one new rod in USDI 1219, Ford dump truck, due to the loss of all oil, while USDI 2950 was given a new lease on life by having a reconditioned motor installed. This motor was overhauled in Headquarters's shop and is a hard sleeve job. USDI 1457 was given a tuneup and the fender ironed out and prepared for re-finishing. Two heavy steel tool boxes were made and installed on dump trucks. A post puller for steel posts was constructed for use by Mr. Mullenau in fencing jobs at Casa Grande and Montezuma; a Barko gasoline jackhammer and an air compressor for use on the same jobs were repaired and put in working order. A portable light and power stand was built for use in the shop, also from scrap materials.

At present I am working on a small motor to replace the heat motor for the museum exhibit at White Sands National Monument.

One official trip was made to Phoenix during the month.

SWM

BRANCH OF ACCOUNTING

By Parke W. Soule, Chief Clerk
Coolidge, Arizona

Vouchers prepared during the month, regular appropriations.	142
Vouchers prepared during the month, CCC	70
Purchase Orders issued, regular appropriation, Hdqrs	83
Purchase Orders issued, CCC	136
Allotment Ledger Sheets prepared, regular appropriations.	203
Allotment Ledger Sheets prepared, CCC	125

Expenditures:

1411000 National Park Service, 1941	8,929.58	101,167.72
140/11000 National Park Service, 1940-41	106.00	1,691.05
14x1010, Roads & Trails NPS	851.70	6,652.39
1410130 Soil & Moisture Conservation, 1941	1,533.73	2,737.26
Civilian Conservation Camps	9,553.75	87,276.23
Total	20,974.76	199,524.65

PERSONNEL NOTES

Method, malice, or honest hard luck, we wouldn't know, but Johnwill Faris stuck his pickup in the rain along the game refuge fence at White Sands while he and High Miller were checking corners. And the next day he stuck two cars and five officials on the road to Dog Canyon. Faris is one of those fellows who stick at nothing.

Hugh Miller, notoriously unaware of meal time, reached Tonto just at noon without food, and got in on a grand lunch in the Peavy tent. Oliver Taylor, Monty, and Harry Hommon got there a little later with box lunches as gentlemen should do. Harry is supposed to have brought a lunch for Miller, but all the superintendent ever saw of it was an orange and he split that with the chief engineer over on the Onion Saddle road coming out of Chiricahua the next day.

Carol Ann Peavy, age 3, having learned not to kick up the dust in the Tonto ruin or to disturb visitors while daddy was talking, vehemently told another youngster who was doing the very thing, "You're not sposed to do that!" And made it stick.

Johnwill Faris, having two rangers is the only custodian in the Southwestern National Monuments who can say "the ranger force" instead of "the ranger." And a mighty fine force it is.

Oliver Taylor (Chief Engineer) looking at the rock work in the Chiricahua utility yard for the first time thought that the future archeologist would be inclined to regard it as a defence structure. But he agreed it was a mighty neat, effective layout. He was hopefully shown the power house with the explanation that it was a nest built with the thought that a little bird in the shape of a power plant might fly in.

Frankie Fish (Chiricahua) was on leave most of April, and didn't stray far from the best monument. Believe it or not, Frankie got his fun punching cattle for a rancher neighbor.

Jim Eden (Bandelier) is a handsome cuss in his new uniform. But this winter he has been wearing it only now and then, forsaking it for more versatile coveralls as befits a versatile man who roofs and paints and plumbs and plasters, making maintenance hay before the sun of heavy visitation shines.

Personnel scoop of the month is the news of the arrival on April 16 of Patricia Margaret Toulouse, seven pounds $1\frac{1}{2}$ ounces of pure joy for Betty and Joe Toulouse. Congratulations, Gran Quivira, on the increase in staff. Will you call her Pat., Patty, or Patsy?

Among the Navajo laborers employed at Chaco Canyon have been John Cly, Dan Cly, and Joe Cly. Parke reports that he is awaiting with interest the appearance of their better known clansman, Gee Cly.

Headquarters has been almost deserted much of the time during April. Chuck Richey and Joe Golden made a business trip to Los Angeles, Louis Gastelum and Jules LaVergne have been visiting CCC camps, Dale King has been at Montezuma Castle, and Parke Soule spent a week in Phoenix. Al Bicknell went to Bandelier, and Francis Elmore was terminated, so that the staff population at Casa Grande was also reduced. However, since the few

who remained behind have been trying to keep up the work of those who were away, the old saying about the mice playing while the cat was off somewhere, hasn't proved true.

Hugh has been gone nearly all month. The serious illness of his mother called him and Christine to Beatrice Nebraska, but Mrs. Miller passed away before Hugh and Christine arrived. Those of us at Headquarters are glad to have had the opportunity to meet Hugh's mother during the visit she paid us last winter. Hugh had no sooner returned to Headquarters than he was called into the field where he remained until nearly the end of the month.

Frankie Fish's monument received a big writeup in the April 20 issue of the New York Daily Times according to a news item in the Phoenix Republic. No wonder Frankie has felt that he earned a vacation. Joyce Muench, wife of the noted California photographer, is the author.

Gene Stonehocker has been going around with a broad smile of late. Out of a clear sky he received six N.Y.A. boys as helpers. And what a change the boys have made in the appearance of some of the worn out paint jobs that have been around the shop!

Teddy Baehr reports sadly that the bats are leaving the Casa Grande. Teddy likes the bats, although he doesn't care much about cleaning up after the. Teddy says that the attractive publicity that Colonel Boles had been putting out lately has probably caused the Casa Grande bats to head for Carlsbad Caverns. (Bet they come back after they've seen the place -- Ed.)

Hank Schmidt has been in bed with a bad cold. Hope you're back on the job again now, Hank. Incidentally, did you all note in Hank's report that he and Engineer Miller recently discovered another arch, the 83rd?

Oh yes, while we're talking about Teddy Baehr, we mustn't forget to announce that he got a haircut last week. This is a sure sign that spring is here at last.

Visitor dogs have been doubly taboo at Casa Grande ruins of late, but because of danger to the dogs rather than to the wildlife, Parent owls, with four young on the walls, have taken to dive-bombing the on-leash dogs which have accompanied visitors through the ruins. There is some talk of renaming the owls Stuka in place of the Pima name Chù'koot.

Fenton Pulsipher, the recent addition to the Headquarter's clerical force, has made quite a social hit in Coolidge. Envied: the high school girl who is seen with him on the dance floor or tennis court. There is a rumor, however, that the high school boys are planning to institute proceedings.

Following last month's request, in this column, for suggested names applicable to the Relief Ranger Mahan pickup-trailer combination, the following have been received: Wandering Jew, Free Irish, and The Wild Irishman. Russ and family left a few days ago for Bandelier thereby starting on orbit similar to that established by Prince Alberts, Okie, and the Flying Dutchman.

The
SUPPLEMENT
to the
Southwestern National Monuments
Monthly Report

THE NATIONAL PARK SERVICE AND THE DEFENSE ECONOMY

By Earl Jackson, Custodian
Montezuma Castle National Monument

(Presented at Second Annual Custodians' Conference
Coolidge, Arizona, February 19-21, 1941)

We of the National Park Service are not building fast tanks, battle-ships and dive bombers, nor are we training legions of young men in the use of those tools so necessary to the physical defense of our country; but we are contributing a vital force to our national defense just as surely as the Army's coastal guns and the Navy's destroyers. They can protect our boundaries and seaports from invasion, without help from us, and yet all the strength they are so rapidly building couldn't prevent the collapse of the United States without the support of the forces which are represented by the Park Service.

Perhaps that sounds paradoxical, but you don't have to probe your memories very deeply for a vivid case in point. Look at what happened to France. Her Maginot Line was believed by military experts to be the most powerful line of defense the world has seen, and yet an amazingly brief campaign reduced her to a vassal state in a few short weeks. Why? We are beginning to learn the answer. Germany didn't try to storm that invincible line. She probably never had any intention of taking it, for she had won the war before she ever set a division on French soil. For years she had been so cleverly sowing propaganda among the French people that by the time she was ready for the big push, the stage was set for an easy victory. For her undercover work had born rich fruit in disrupted morale, and overt aggression was little more than a formality in taking over the nation.

Now I am not qualified to deliver a treatise on military tactics. But I think it is obvious that Germany could never have harvested her propaganda crop in France unless its seeds had fallen on fertile soil. There was something wrong with the very heart of the country. Psychologists have a name for that condition. They call it schizophrenia, or split personality. What could the army do, when the issues for which it stood were torn asunder by internal forces of doubt and suspicion? You can't fight for a flag which has already fallen from the mast.

The United States, like other nations, cannot defend itself simply with guns and soldiers. It must add to its physical strength the other half of that victory-winning combination, morale and backbone to stand behind the army. Reduce that, and we have the statement that this country is as strong as its average man or woman. All you need for strength, then, is to keep him healthy. Sounds simple, doesn't it? Feed a baby on a scientific diet and he grows into a solid and vigorous man. Figure out a suitable mental formula to keep efficient and happy, and you have a resulting mixture of mind and body which in the aggregate could make a winning nation forever.

Let's take a look at John Smith, an average American, and see what makes him tick. A lot of things work inside his body to keep it going as a healthy machine, and of course the brain is boss of them all. But what controls his brain? His mind, you say. Scientists agree to that, but when they try to explain what makes the mind work, after several thousand years of endeavor they admit they don't know a great deal about it. They have learned, however, that the mind is a mighty complex thing, and that it gives John's personality an infinite number of possibilities. A poet, whose name I can't recall, gives a good picture of the mind in the following lines:

"Within my earthly temple there's a crowd.
There's one of me that's humble, one that's proud,
There's one that's broken hearted for his sins
And one who, unrepentent, sits and grins.
There's one who loves his neighbor as himself
And one who cares for naught but fame and pelf.
From much corroding care would I be free
If once I could determine which is me."

So John Smith's brain is not really made of just one character, but a whole congregation of them. As long as he is functioning properly he has those different characters all working together in harness for him. His forces for good and evil act as checks and balances on one another, and he has a healthy mind. Cooperating with himself that way, he is a normal member of American democratic society.

There is a funny thing about Smith's brain, though. It has to be kept busy to stay out of trouble. The minute he lets down and relaxes, some of his characteristics become dominant and others become logy and inactive, like a fat toad dozing in the late afternoon sun. This gives a lopsided mental pattern capable of great mischief, and it leads us into the key to the whole situation confronting us in our scheme of national defense.

John Smith's ancestors fought in the Revolutionary War and established this as a free country and a democracy. The war over, the people were faced with the gigantic task of empire building. They were filled with the pioneering energy of a new order, a people who found the vast American wilderness a stimulating challenge. Concerted force of mind and body used to the utmost were required to push ahead to new frontiers and build new industries behind them. There was no time for aimless milling and bickering.

The states grew in number, and John's ancestors pushed vigorously on through the War of 1812, delayed their progress in the Civil War, but forged again ahead and through the Spanish American War, until finally there were 48 states. Work never lessened, for the new areas of the country were still crying for development. People hadn't yet really learned what leisure was, although they could see vaguely ahead to a Utopian day in which man could let up a bit from his toil of factory building and money making, to indulge in the pleasures of a higher scale of living and shorter working hours.

Finally we get down to John Smith himself. He appears on the scene after his forbears have spent more than a century and a half removing the frontiers and developing the resources of the United States, and he finds the American people are at last beginning to catch up with themselves. Industry has reached the point where shorter working hours are a reality instead of a dream, and the standard of living is much higher than ever before.

John, being an average American, learns a trade, and after a time gets a job in an industry which has been established long enough to be settled in a groove of custom, where everything is impersonal and efficient. He soon learns the routine of operating the machine which does most of his work. Before long his manipulation becomes a reflex action, requiring no mental effort on his part. If the restless imagination of the pioneer strain from which he comes exerts itself, he soon finds his mechanical efficiency is impaired by an uneven tempo, and so of necessity curbs his mental impulses to become just another smoothly working cog in the assembly line of mass production. He works his 40 or so hours a week, stands in line to receive his salary check, and has the long evenings and one to two days a week to devote to his leisure time.

Off the job, John naturally follows the mechanical rounds of play which have been provided by our cities. He goes swimming in an artificial pool, and perhaps plays baseball on a company team. He attends the movies and the prize-fights, goes to dances, plays cards and gambles a little, and drinks a little gin or whiskey. This is the way he spends his idle time, although sometimes he will read a book if it is short and pepped up with enough dialog to make it interesting.

John becomes bored with the endless, monotonous repetition of his movements at the machine where he works, and with the same perpetual circle of amusements he follows week in and week out. He becomes dissatisfied, with a restlessness which he cannot understand. His mind, growing rusty with disuse, is growing lopsided, for certain characteristics, those higher qualities of imagination, insight, and incentive, have been shelved in a dusty attic of his brain for so long they fail to check and balance the more primitive instincts and emotions. A vital part of that spiritual force which has raised man above the animal plane is undergoing atrophy.

John hasn't reflected on this. He hasn't discovered that idleness is not the goal of leisure time, but should be only a means to an end, an end which is not of loafing but of recreation. His forbears found all the recreation of mental and physical forces they needed in the ever stimulating contest of wresting a living and a civilization from the raw and elemental frontier of the wilderness. The same forces in John find no chance for physical expression in the restricted mechanical orbit of his life, and lack the stimulus for replacing a vanished physical frontier with the higher frontiers of the spirit. All he knows is that he needs some kind of stimulation which is new, exciting, and dangerous.

In this condition John is made to order for the sowers of discontent. Aggressive propagandists from foreign countries, labor agitators, anarchists, proponents of a host of new-isms and cults designed to appeal to the jaded mind, all greet the John Smiths with open arms. For here are

the people, jaded and weary with routine, who will gladly lend their ears to radical doctrines.

Is it strange then, that the idle man, knowing there is something unsatisfactory about the scheme of things, can quickly be convinced the fault is with his country instead of with his perception, and that he is a victim of unjust social and legislative practices, a submerged member of an underprivileged minority, or a pawn for ogling and mercenary capitalists? His picture of government lacks rounded perspective, and his provincial bias can easily become a distorted concept which will go beyond the point of seeing genuinely needed reforms to the belief of malpractice where it doesn't exist.

Do you have to multiply a John Smith by many millions to visualize how easily conditions of discord may rise within a nation to make way for civil war and revolution? From there it is only a step for a country torn within itself to fall under a dominion not its own. When a country rots like a tree, from the inside out, an army and navy can do nothing.

Fortunately, the country has not reached the extreme state made possible by John Smith's idle hours. It has made a dangerous beginning, but it has developed agencies to fight that weakness. It is not within the scope of this paper to discuss all the fascinating weapons with which the people of America are fighting against internal corrosion. But we can point out that the vigorous and rapidly growing National Park Service makes mighty powerful medicine for John's perspective.

We can truthfully say that the National Parks and Monuments comprise an enormous out-door museum containing a cross section of all that is finest of America's material wealth, her history and tradition. Our historic shrines and beauty spots are perfectly designed to show the citizen what is finest of our national heritage, and to develop a national perspective in moral, social and aesthetic values of all that we have and stand for. In other words, as Dr. Carl Russell puts it, "the Park Service is an agency readymade and prepared to contribute to the maintenance of confidence in the American way".

We know that progressively more and more of our John Smiths are driving out of the crowded cities to visit National Park areas. Last travel year nearly 17,000,000 people were visitors. That means about one in every eight persons in the nation. They went home and told their families and friends of what they had seen and learned. Through the media of talks outside the parks, radio addresses, magazine articles, press releases, the U. S. Travel Bureau, cooperation with state school systems and private colleges, civic organizations and clubs, and other agencies, Park Service men contact, directly or indirectly, nearly every man, woman and child in the United States.

You know as well as I that the Park and Monument areas have something of great value to offer our entire population. But where do you and I fit in, as employees of this service? We reach the people, but how can we best serve them and contribute our part to the building of national morale, so essential to a sound defense economy?

Well, of course we protect the service areas from vandalism and destruction. That goes without saying. But our services as guardians are of little value to national defense. We are not hired for our training and

technical knowledge to be only caretakers. Idle men can be found on every street corner who, for a pittance, will gladly patrol and police the system.

The most important job we can do for the people is twofold: Sell and interpret.

Our selling job is unique. Our stock in trade is the United States. Our sample case is the National Park System. Its contents are samples of the finest things Nature has made, plus outstanding memorials to what Nature and Man have done together. The salesmen are all the Park Service men who meet the public, superintendents, naturalists, custodians, rangers, historians, ranger naturalists. Each salesman's territory is his own front door. The prospective customers number about 130,000,000 in the U. S., with a good sprinkling of them from all over the world.

Whoever heard of such a salesman's paradise? The setup is perfect. But, you ask "Why are we selling the National Parks and Monuments? We can't sell the people something that already belongs to them." But wait a minute. Remember we were talking about John Smith? He didn't have a particularly clear image of government, did he? Of course, if he thinks it over, he realizes that he, as a citizen, is a part owner of every foot of public land in the Union. But what John knows and what he feels are sometimes two different things. He is apt to feel either that the government is a big boss and he is just working for it and handing over part of his pay check to it, to be used he knows not how, or he may adopt the idea the government is just working for him. What our sales job amounts to is two things:

We have got to tell about our areas in a clever enough way to get Smith interested. That basic task accomplished, we must convey the second point, that the government is merely the multiplication of his energies as an individual, that he is part and parcel of its voice and action. When he finds the government wants his reactions and thoughts, in order the better to be guided in helping him by mass effort to attain what he couldn't get singlehanded, he can't help feeling like the part owner he is in the National Parks. He then is no longer a spectator, but an actor.

After this vital job of rousing interest and sense of ownership in John Smith is done, comes the end of the selling job, and the great task of teaching the man to use what we have sold him. There's no use selling a farmer a fine looking harvester-combine unless he knows how to use it to gather his crop.

To the greater part of our population, its first view of the National Parks is simply a view of a vast panoramic picture. We Park Service men are to them the animators of a Walt Disney cartoon. We transmute what to them is a two tone and two dimensional picture into a living thing of force, action and movement.

We animators, or interpreters, have to prepare with our words and actions a mental dish which is tasty and appetizing, easy to digest, and has a lot of energy. We are feeding John Smith's mind with worthy thoughts of things American to fill its leisure time, to replace idleness with a stimulating recreative force which will give tonic to his imagination and morale to his heart.

We can most effectively present significance of Park Service areas
SOUTHWESTERN NATIONAL MONUMENTS 243 SUPPLEMENT FOR APRIL, 1941.

to the people through the medium of Nature Study. Prehistoric ruins, battlefield sites, historic houses, are all just as integral a part of Nature as her obvious rocks, streams, flowers, birds, and animals, if you consider that they are simply manifestations of man's efforts to adapt himself to his environment.

We who become good interpreters must do far more than simply name and describe what we see. A card index is useful only as a tool, and the naturalist who makes of himself simply a walking catalog of facts is not worth his salt. For what is knowledge by itself? Look at the books on your library shelves. There they are, row after row, completely crammed with knowledge. When nobody is looking, take a squint and see how many have gathered dust on top. They all contain facts, but only those which treat their facts so we can use them in everyday life are free of dust.

Give us the man who knows his facts and uses them as tools to help the visitor probe deeply into the secrets of Nature. Let the presentation of these secrets show all the manifold wonder of natural forces working harmoniously together in a balanced pattern of cause and effect. Show how man himself is an integral part of this pattern, and how by avoiding waste and destruction of natural assets he is conserving for himself and his children a priceless heritage of mental and physical communion with his environment. Give man enough appreciation of Nature that his God-given intelligence will make him able the better to fill his allotted destiny of partnership with her, and enough humility of soul to realize that in case of uncertainty he should give her the benefit of the doubt. For Nature has been at work on this old earth for over a billion years, and surely she knows a little more about how to run its affairs than we do.

Let the visitor see, by examples, how man's mistaken attempts to thwart natural laws have resulted in disaster, and how intelligent use of the resources she has provided in this nation have born rich fruit, both in land use and in use of human resources. Look at the story of erosion, and how man's careless destruction of natural balance has rendered large areas of land sterile. But look also at how man is using that hard gained knowledge to build back the land. Look at the story of agriculture in the Salt River Valley of Arizona. There we have a story of a thousand years of failure by the prehistoric Indians to cope with alkali which accompanied the rising water table during each period of farming, to be finally capped with success of modern farmers, who use pumps to keep the alkali forming water table down. These are intensely human stories, yet they are woven right into the warp and weft of Nature's pattern.

When we have successfully presented our interpretation of Nature and man as a part of the pattern, we have done much to stimulate John Smith to healthful thought. For then he is better able to appreciate our natural wonders, and the vast scope of man's task in utilizing them to his best interests. He can more fully realize, when he visits our historic and prehistoric shrines, the vast amount of blood and sweat and determination that was necessary for many generations of hardy people to build up a land of vast and forbidding wilderness into the peaceful and comfortable home that as a nation we now enjoy. He realizes something

of the inspiration that caused his forefathers to fight so hard for a democracy, when he sees something of the wonders which they as a free people wanted to keep and cherish. The more he sees of the country, the more he realizes that we are, after all, a mighty closely knit organization, and that every man woman and child, no matter how small his task, has an important part to play in maintaining the solidarity and security of our whole social structure. That makes John realize that he, as a cog in a machine, is after all of some importance, and he is certain to take some pride in that fact.

When we of the Park Service can help make John Smith feel pride in himself and his country we have given him something worth while to think about. And when his mind is busy with something stimulating and worthwhile, he has little room for seditious thoughts. We have made a better, more loyal citizen. One-hundred-thirty-million times that, and we have enough internal morale to keep the flag on top of the mast, where the army can see it. That makes defense economy that can cope with anything.

SWIM

HANDLING THE DISGRUNTLED VISITOR

By Paul Beaubien, Custodian
Walnut Canyon National Monument

(Presented at the Second Annual Custodians' Conference,
Coolidge, Arizona, February 19-21, 1941)

It would seem that handling the disgruntled visitor merely takes good judgement -- the same sort of judgement one should exercise when driving a car, or performing any duty. Speaking for myself, there have been times when my judgment was good, and there have been times when I did not think fast enough or when my judgment was not so good. The frequency of occurrence of these latter occasions have decreased somewhat by knowing in advance the answers to some complaints. I believe we should be considered salesmen, not only of the National Park Service but, also, of cooperating agencies, and any good salesman must know the "answers" to the objections of his customers.

The most important questions raised by disgruntled visitors, and the "answers" to those questions, was the subject of a paper given at last year's meeting, by our Superintendent. A copy of this paper is, or should be, in the files of every monument.*

Also, there is the Director's full-page memorandum of January 29, 1940, concerning complaints. To quote a few statements from that memorandum:

"The manner in which the local Service representative and his staff handle complaints by park visitors is a measure of their efficiency. The object of course, should be to satisfy the complainant and to remedy at once the conditions complained about if the complaint is justified.

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Good will and good standing, based upon years of earnest and conscientious effort, may be destroyed by a moment of carelessness, or indifference.

The thing not to do is to resent a complaint or let the complainant feel that his criticism or suggestions are unwelcome. the thought that the guest may be right should be present in the mind of every ranger or other employee contacting the public."

There is more to this memorandum, but a copy is, or should be, in the files at every monument.

Then there is the Washington memorandum of January 8, 1940, with attached model examples of letters answering written complaints. I believe that written complaints are usually answered by the Coolidge Office. However, it behooves field men to know how these letters should be written. A copy of this memorandum is, or should be, in the files at every monument.

Now for some of my own rationalization about complaints. Of the unjustifiable complaints, I believe that a few come from people who already know the "answers". They just wish to do a bit of wise-cracking. But the serious complaint comes from those who do not know all the facts concerning the condition which irritates them. Usually a ranger can good-naturedly supply the missing facts, and the visitor is satisfied. In general, visitors are capable of understanding why their dog shouldn't be turned loose to chase rabbits, but they dislike being told to do this, or not to do that, when the necessity of some regulation or condition has not occurred to them. I suspect that even custodians have been irritated by some order emanating from Headquarters, the usefulness of which was not understood.

When one is unable to explain a condition to the disgruntled visitor's satisfaction, either because of not knowing the "answers", or because of the visitor's mentality or prejudice, it is easy to give the visitor the address of the Superintendent at Coolidge.

Some custodians can forestall a complaint, or an act of vandalism, by an apt remark. By immediately telling a visitor that only the highest class of interested visitor would come in over such bad roads, the visitor is supposed to be so pleased that he forgets all about the chuck holes. If the results of thoughtless and selfish acts of vandalism are at once pointed out to a visitor, seldom would one disagree with Park Service ideas of protection. Also, he is "educated" when he reaches the next area.

I believe it may be said that Park Service areas belong to the visitors. They are citizens, taxpayers, and voters. They pay our wages, and the existence of the Park Service is dependent on their good will. They certainly have the right to complain, and the right to expect a satisfactory answer. We can't show too much favoritism to the individual complainant, but each one furnishes an opportunity to promote understanding and, perhaps, friendship.

SWNM

SALESMEN OF KNOWLEDGE

By Glenn Frank

The future of America is in the hands of two men--the investigator and the interpreter. We shall never lack for the administrator, the third man needed to complete this trinity of social servants. And we have an ample supply of investigators, but there is a shortage of readable and responsible interpreters, men who can effectively play mediator between specialist and layman. The practical value of every social invention or material discovery depends upon its being adequately interpreted to the masses. Science owes its effective ministry as much to the interpretative mind as to the creative mind. The knowledge of mankind is advanced by the investigator, but the investigator is not always the best interpreter of his discoveries. Rarely, in fact, do the genius for exploration and the genius for exposition meet in the same mind. Many negro mammies of the south can make a strawberry shortcake that would tempt the appetite of the gods, but they might cut sorry figures as domestic science lecturers. The interpreter stands between the layman, whose knowledge of all things is indefinite, and the investigator whose knowledge of one thing is authoritative. The investigator advances knowledge. The interpreter advances progress. History affords abundant evidence that civilization has advanced in direct ratio to the efficiency with which the thought of the thinkers has been translated into the language of the workers. Democracy of politics depends upon democracy of thought. "When the interval between intellectual classes and the practical classes is too great," says Buckle, "the former will possess no influence, the latter will reap no benefit." A dozen fields of thought are today congested with knowledge that the physical and social sciences have unearthed, and the whole tone and temper of American life can be lifted by putting this knowledge into general circulation. But where are the interpreters with the training and the willingness to think their way through this knowledge and translate it into the language of the street? I raise the recruiting trumpet for the interpreters.

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Washington, D.C. Plate 2855

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SOUTHWESTERN MONUMENTS

MONTHLY REPORT



MAY 1941

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

SOUTHWESTERN NATIONAL MONUMENTS

MAY, 1941, REPORT
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HEADQUARTERS

SOUTHWESTERN NATIONAL MONUMENTS
NATIONAL PARK SERVICE

COOLIDGE, ARIZONA

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HUGH M. MILLER, SUPERINTENDENT

<u>FIELD STATION</u>	<u>POST OFFICE</u>	<u>CUSTODIANS</u>	<u>1940 VISITORS</u>	<u>AREA IN ACRES</u>
1. ARCHES	Moab, Utah	Henry G. Schmidt	2,518	34,299.70
2. AZTEC RUINS	Aztec, New Mex.	Thomas C. Miller	10,550	25.88
3. BANDELIER	Santa Fe, N.M.	Chester A. Thomas	13,689	26,026.20
4. CANYON DE CHELLY	Chin Lee, Ariz.	Charles D. Wyatt	2,733	83,840.00
5. CAPULIN MOUNTAIN	Capulin, N. M.	Homer J. Farr	35,100	680.37
6. CASA GRANDE	Coolidge, Ariz.	Albert T. Bicknell	12,877	472.50
7. CHACO CANYON	Chaco Canyon, N.M.	Lewis T. McKinney	2,245	21,509.40
8. CHIRICAHUA	Dos Cabezos, Ariz.	Frank L. Fish	10,120	10,897.00
9. EL MORRO	Ramah, New Mexico	Robert R. Budlong	1,593	240.00
10. GILA CLIFF DWEL.	Silver City, N.M.	No Custodian	80	160.00
11. GRAN QUIVIRA	Gran Quivira, N.M.	Joseph H. Toulouse Jr.	2,494	560.00
12. HOVENWEEP	Cortez, Colorado	No custodian	352	285.00
13. MONTEZUMA CASTLE	Camp Verde, Ariz.	Earl Jackson	8,078	520.00
14. NATURAL BRIDGES	Blanding, Utah	No Custodian	901	2,740.00
15. NAVAJO	Tonalea, Ariz.	James W. Brewer Jr.	513	360.00
16. ORGAN PIPE CACTUS	Ajo, Arizona	William Supernaugh	9,775	330,690.00
17. PIPE SPRING	Moccasini, Arizona	Leonard Heaton, Act.	1,141	40.00
18. RAINBOW BRIDGE	Tonalea, Arizona	No custodian	215	160.00
19. SAGUARO	Tucson, Arizona	Don W. Egermayer	16,892	63,284.00
20. SUNSET CRATER	Flagstaff, Ariz.	D. Jones, in chg.	11,888	3,040.00
21. TONTO	Roosevelt, Ariz.	John Peavy	5,240	1,120.00
22. TUMACACORI	Nogales, Arizona	Louis Caywood	7,287	10.00
23. TUZIGOOT	Clarkdale, Ariz.	Jack Cotter	6,125	42.66
24. WALNUT CANYON	Flagstaff, Ariz.	Paul Beaubien	12,258	1,873.10
25. WHITE SANDS	Alamogordo, N.M.	Johnwill Faris	54,498	143,227.47
26. WUPATKI	Flagstaff, Ariz.	David J. Jones	3,326	35,813.03
27. YUCCA HOUSE	Cortez, Colorado	No custodian	136	10.00
TOTALS			232,624	761,917.11

TOTAL AREA, 1,190.49 SQUARE MILES

OPENING

By Hugh M. Miller, Superintendent

The superintendent spent the first half of the month at Headquarters, cleaning up an accumulation of correspondence and pinch hitting for the assistant superintendent during the latter's absence on field inspections. Beginning May 16, he was absent from the office until May 24. The trip included three days at Arches National Monument, and thereafter travel was performed on the director's itinerary, including stops at Mexican Hat, Goulding's Trading Post in Monument Valley, Kayenta, Grand Canyon, and Wupatki, Montezuma Castle and Tuzigoot National Monuments. The director's party reached Casa Grande National Monument on May 24. From Casa Grande Assistant Superintendent Richey accompanied the director, making stops at Tumacacori, the proposed Coronado Memorial, Chiricahua, and White Sands.

Regional Director Tillotson was with the director's party throughout the itinerary. Park Collaborator Frederick Law Olmsted left the party at Grand Canyon, but was present during the inspection of Arches National Monument. Park Collaborator Duncan McDuffie left the party at Bisbee, having been present at the inspections of Arches, Wupatki, Montezuma Castle, Tuzigoot, Casa Grande, Tumacacori, and the proposed Coronado International Memorial.

Opportunity was thus afforded for unusual conference on problems affecting the Southwestern National Monuments visited. It is hoped the director may return to gain more extensive familiarity with the monuments and their organization.

The CCC program, having been handicapped by unusually severe winter weather and very bad roads for several months past, was seriously impeded during May by slack enrollment and, at Bandelier and Chaco, by the diversion of enrollees and equipment to emergent flood control work on the Rio Grande and San Juan Rivers in New Mexico. Most serious situation is at Bandelier. As a result of these interruptions, it now appears to be impossible for the camp to complete current jobs by June 30, the date on which the camp is scheduled for termination. Urgent recommendation has been made for its continuation to July 31.

Senate Bill 394 to revise the boundaries of Saguaro National Monument, passed the Senate on May 15 and was referred to the House Committee on Public Lands on May 19. The bill provides for the acquisition of state and private lands and, if finally approved, will correct an anomalous situation of long standing and establish the administration of the monument on a firm and logical basis.

H. R. 2675 "To permit mining within the Organ Pipe Cactus National Monument" was, according to the latest information available to this office, reported favorably by the House Committee on Public Lands. The companion bill, S-260, was still in the Senate Committee on Public Lands and surveys. Passage of this legislation would result in serious impairment of natural values. The bill is in obvious conflict with the purposes for which the reservation was made, and several national organizations interested in conservation are stoutly opposing its passage.

Travel to the monuments has held up exceptionally well considering the late spring with its storms, cold, and consequent nearly impassable roads throughout the northern portions of the territory. High water in the Rio Grande and some of its tributaries has caused serious floods with bridges taken out and roads blocked. Long detours and slowing of travel have undoubtedly caused many spring tourists to bypass monuments otherwise included in their itineraries. Regardless of these deterring factors, travel for May showed a gain of 6,001 visitors over May 1940, while for the travel year from October 1 to date is 16,684 ahead of the corresponding period last year. The usual semi-annual "between seasons" slump made itself felt with a dropping off of 6,195 visitors from the travel total for April, 1941.

An outstanding travel feature for May was the large number of organized groups, especially school parties, which visited the monuments. This trend, if it is one, will be watched with interest to determine whether, as roads are improved and group transportation becomes more readily available, institutions are making greater use of Service areas and facilities for in-the-field illustrations of classroom subjects.

CONDENSED REPORT

GIVING HIGHLIGHTS OF THE MONTH

Coolidge, Arizona,
June 1, 1941.

The Director,
National Park Service,
Washington, D. C.

Dear Mr. Director:

The Condensed Report for the month of May, 1941, follows:

OOO GENERAL

<u>Olo Travel</u>	<u>May 1941</u>	<u>Travel Yr. to date</u>	<u>May 1940</u>	<u>1940 Travel yr. to date</u>
Arches	553	1,915	351	1,637
Capulin Mountain	1,800*	8,450*	1,800*	10,500
Chiricahua	1,020	5,725	737	4,591
Natural Bridges	75*	75*	106	212
Organ Pipe Cactus	900*	8,380*	850*	7,235*
*** Rainbow Bridge	26*	104*	25*	35*
Saguaro	1,235	12,307	1,162*	14,394*
Sunset Crater	772*	3,000*	730*	3,586*
White Sands	5,664	34,117	3,870	23,480
Total Biol.-Geol.	12,045	74,073	8,837	65,670
Aztec Ruins	1,005	3,431	591	3,518
Bandelier	651	2,545	897	3,500
Canyon de Chelly	106	535	183	1,050
Casa Grande	1,160	14,750	619	9,348
Chaco Canyon	118	384	162	919
El Morro	48	223	122	601
Gila Cliff Dwellings	10*	20*	---	---
Gran Quivira	227	1,152	164	1,206
Hovenweep	110*	153*	---	---
Montezuma Castle	780	4,211	693	3,833
Navajo	41	174	41	174
Pipe Spring	235	661	300	642
Tonto	1,701	7,158	376	4,245
Tumacacori	724	6,906	420	6,161
Tuzigoot	717	4,892	314	3,171
Walnut Canyon	796	3,419	815	4,126
Wupatki	315	1,490	265	1,374
Yucca House	18	45*	---	---
Total Arch.-Hist.	8,762	52,149	5,959	43,863
GRAND TOTAL FOR MAY	20,807	126,222	14,796	109,538
Last Month	27,002	105,337	20,952	94,038

* Estimated Travel

***April travel of 78 included

CONDENSED REPORT (Continued)

Wupatki - Director Drury's party, O.G. Taylor, H. Hommon, J. Diehl, C. Richey, A. Kuehl, C. Krueger, D. King, and J. Brewer.

130 INVESTIGATION OF NEW AREAS AND BOUNDARY EXTENTIONS

Wupatki - A reduction of 52.27 acres in the area of Wupatki National Monument was proclaimed.

White Sands - Study of the area was carried out to determine exact location of boundaries (p.271).

160 PUBLICITY

El Morro - The custodian received 15,000-16-page booklets for distribution (p.268).

200 MAINTENANCE NEW CONSTRUCTION AND IMPROVEMENTS

210 UNUSUAL MAINTENANCE

Canyon de Chelly - Sewer line unplugged (p.259).

Casa Grande - Long list of completed jobs on page 264.

Chaco Canyon - Many water gaps were replaced (p.276).

El Morro - Grass growing up through trail surfacing cut down (p.267).

Gran Quivira - Custodian's residence repaired and refinished (p.258).

Bandelier - Weed control work necessary (p.286). Water system put into working order (p.284). Residences plastered (p.285).

Navajo - Water system repaired and put into operation (p.280).

Tumacacori - New service gates hung (p.273).

White Sands - Light plant repaired (p.271).

230 SPECIAL IMPROVEMENTS, CCC, ETC.

Arches - Work progressed well on custodian's residence construction (p.257).

Bandelier - South boundary fencing project progressed slowly (p.286).

Montezuma Castle - Campground development completed (p.275).

Walnut Canyon - Entrance road 100 per cent complete, plastering complete in part of administration building (p.270).

240 IMPROVEMENTS TO APPROACHES

Montezuma Castle - One approach road being oiled (p.274).

Walnut Canyon - Clearing done on approach route (p.270).

300 ACTIVITIES OF OTHER AGENCIES

310 UTILITY OPERATORS

Chaco Canyon - Operator moved in for summer season (p.277).

320 COOPERATING GOVERNMENT AGENCIES

Bandelier - State Highway Department placed many signs on approach road (p.286).

Tumacacori - Fish and Wildlife Service studying hite-wing oves (p.273).

400 INTERPRETATION

410 LECTURE AND GUIDE SERVICE

All Areas - An increasing number of schools and other organized groups required a considerable expansion of the interpretive services in a number of monuments. Inauguration of a much enlarged interpretive program at Chiricahua is indicated (p.278).

Bandelier - One outside talk given. Seasonal guide hired (p.284).

Navajo - Contact station finished (p.281).

Tumacacori - Noted historian gave illustrated lecture (p.273).

CONDENSED REPORT (Continued)

Tuzigoot - Temporary trail made lower ruins accessible. Western gateway to southwestern monument areas indicated (p.269).

420 MUSEUM ACTIVITIES

Gran Quivira, White Sands, Montezuma, and Bandelier - New herbarium folders received.

Montezuma Castle - Museum cases installed and some exhibits moved (p.274).

Tumacacori - Labels installed in case No. 26 (p.273).

Walnut Canyon - Museum planning continued (p.270).

White Sands - Museum case lights installed (p.271).

RESEARCH AND OBSERVATION

431 BOTANY

Arches - Flower collecting project continued (p.256).

Pipe Springs - Replacement native plants noticed; trend toward climax type indicated.

432 ZOOLOGY

Casa Grande - Owls left ruin shelter (p.264).

Organ Pipe Cactus - Wildlife seems to be on increase (p.272).

433 GEOLOGY

Arches - Two new arches discovered (p.256).

434 ARCHEOLOGY

Gran Quivira - Archeological survey specimen records brought up to date (p.258).

Wupatki - Work resumed on excavations (p.283).

440 LIBRARY

Gran Quivira and Headquarters - Many repaired volumes received (p.258).

500 USE OF MONUMENT FACILITIES

510 INCREASE OR DECREASE IN TRAVEL

All Areas - Complete travel records appear on page 251. Totals follow: May 1941, 20,807; May 1940, 14,796; April 1941, 27,002. Travel year to date 1941, 105,337; 1940, 94,038. A great number of school parties and organized groups were noted at Pipe Springs, Aztec Ruins, White Sands, Tonto, Tumacacori, Montezuma Castle, and Capulin Mountain.

520 NEWSWORTHY VISITORS

Bandelier - James R. Garfield, and B. A. Taussig.

Canyon de Chelly - Photographer Earnest Knee (p.259).

Montezuma Castle - Eddie McKee, Dr. Slipper, and Ned Spicer.

Tumacacori - Fred Winn, Johnson Neff, and Game Warden Peterson (p.273).

PROTECTION

640 FOREST AND BUILDING FIRE PROTECTION

Casa Grande - Fire hazard caused by great abundance of dried grass (p.264).

Chiricahua - Fire lookout placed on duty (p.278).

Bandelier - Equipment and supplies readied for season (p.285).

Pipe Springs - Abundance of grass makes fire hazard (p.261).

Saguaro - Fire lookout went on job during month. Radio contacts made.

Lower areas have unusual fire hazard due to great increase in vegetation due to past wet-weather-winter (p.265-6).

650 RUINS STABILIZATION

Canyon de Chelly - Stabilization started on White House Ruins (p.259).

Casa Grande - Compound F backfilling completed (p.264).

FIELD REPORTS

FROM THE MEN ON THE JOB

ARCHES

By Henry G. Schmidt, Custodian,
Moab, Utah.

Visitors this month, 553; travel year to date, 1,915.

Weather: May followed the example of the preceding month somewhat by giving us more rain and snow, mixed with a few days of high temperatures and hot winds. We have had a very short spring and are now in the brink of our summer season. No attempt is made, by the custodian at least, to predict the weather for the months to come, but if the past is in any way a dependable criterion, we can expect at least three months of very warm weather. We have just experienced the wettest winter in 40 years, and quite possibly we are about to experience the hottest summer!

Roads: The road into the Windows section is in good condition. It is probable that with the help of the CCC maintenance crew we will be able to keep the sand dunes from causing the visitors too much trouble on this section of road.

The Salt Valley road, to Delicate Arch and the Devil's Garden sections, is passable but very rough. Travel over this road is hazardous and uncertain, and visitors are being warned of these conditions.

Visitors: Two of our previous visitor records were broken this month. The total number of visitors, 553, is greater than that for any month on record, and the number of people, totaling 224, who visited the Windows Section May 11, set a new record for a single day's travel into the area. Colorado, Utah, and California sent us the largest number of visitors, with the balance of travelers coming from Nevada, Oklahoma, Iowa, Indiana, Illinois, Ohio, West Virginia, Tennessee, Washington, Oregon, Idaho, New York, New Mexico, Arizona, Texas, District of Columbia, Hawaii, and Berlin, Germany.

Twenty-four parties, with 204 people, were conducted through the Windows Section and 16 parties, with 195 people, were contacted either at the Willow Springs Ranger Station or on the entrance road, for a total contact count of 399. Two parties, with 12 people, hiked from the Balanced Rock to the Delicate Arch; 17 people hiked into the Courthouse Towers section, and one party of five hiked into the Landscape Arch in the Devil's Garden section.

Director Drury and party, composed of Regional Director Tillotson; Jess Nusbaum, Senior Archeologist, Santa Fe, New Mexico; Superintendent

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Hugh M. Miller; Superintendent Edmond Rogers, and Jack E. Haynes of Yellowstone National Park; Superintendent John McLaughlin, Mesa Verde National Park; George Olcott, Santa Fe; Frederick Law Olmstead, Brookline, Massachusetts; Mr. and Mrs. Duncan McDuffie, Berkeley; L. L. Taylor, Moab, and the custodian, visited the Windows Section and headquarters area.

Other noteworthy visitors were J. H. McGibboney and S. J. Stevenson, Salt Lake City; F. G. Martines and L. A. Wynaught, Richfield, Utah; Tom Williams, Mesa Verde National Park; Luis Gastellum, Jules LaVergne, and Raymond Higgins, Jerome C. Miller and Kenneth Saunders, Region III Headquarters, Santa Fe.

Project Progress for the Month: The improvement and maintenance of the Windows Section road was continued during the entire month.

Several specimens of desert flowers found within the area were collected and are being pressed preparatory to sending them to the University of Utah for identification.

Patrols were made in all sections of the monument except the Delicate Arch. The ground cover in the Devil's Garden is better than last year. Signs of trespassing by trail herds of sheep are evident. Winter patrols in this section are impractical and the strict enforcement of the grazing regulations will continue to be difficult unless the most accessible portions of the boundary are fenced.

Six miles of the east boundary were located and marked. This project has been carried on with the assistance of the CCC. The balance of the boundary yet unposted is some distance from any trail or road, and future boundary posting will be carried on with pack stock. This project will be discontinued until funds are available for the necessary pack stock.

Projects for the Ensuing Month: Collecting and pressing of wild flowers for identification at the University of Utah continued. Work will be continued on maintenance of the Windows section road.

Dr. Ross Maxwell, Regional Geologist, will be here for two weeks, and a pack trip through the entire area for the purpose of geological study is proposed.

It is expected that travel into the Windows section will continue to be heavy, and as much time will be given to interpretive contacts as possible.

Notes of Interest: My first trip to the extreme northern end of the Devil's Garden was made during the month. Harry Reed, former custodian, had told me that he had never been in this part of the monument and knew of no arches in the region. It was quite a surprise to find several small windows and two arches very well hidden in the maze of high, narrow fins. The two arches are approximately 30 by 35 feet in dimension, and in one of them I found the initials "R. C." carved in the sandstone buttress, with the date "1876".

Several pot-sherds have been found in the Windows section and will be sent to Headquarters for inspection and identification.

ARCHES CCC

By Walter W. Welton, Project Supt.,
Moab, Utah.

Work has been progressing better in general the past month. Our dirt moving jobs have been hampered seriously because two of our caterpillars have been down for repairs all month.

Job 2, Multiple Plate Arch Culvert, has speeded up materially. All of the ringstones for one headwall are cut and one half of the ringstones for the other headwall are cut and placed. High water backing up from the Colorado River has prevented us from hauling any rock from our quarry up Courthouse Wash for the past two weeks.

A trail road has been made on Job 13, Entrance Road Section 1-A, almost up to the big fin to enable our trucks and equipment to get over to the next balance point where the material must be hauled ahead on station. A second trap for loading trucks has been constructed in the big cut at about station 18. This will enable us to work the cat and dozer loading trucks continuously.

The custodian's residence is progressing better, but the lack of rocks from the quarry has limited our architect's choice of rock.

A trap is being built across the highway from the Headquarters Area to load the additional material required for regrading the Headquarters Area.

Maintenance work has been done all month on the present road into the monument.

SWNM

GRAN QUIVIRA

By Joe H. Toulouse Jr. Custodian,
Gran Quivira, New Mexico.

Visitors this month, 227; travel year to date, 1,152.

Official Visitors: Chief of Engineering Taylor, Sr. Sanitary Engineer Hommon, Associate Regional Engineer Montgomery, and Van Dunn of Water Rights Section were through this monument on April 28. Mr. Taylor and Mr. Montgomery were anxious to see a wild rattlesnake and were satisfied towards the end of their inspection trip by running into one along side the old treasure shaft in the small church.

Weather and Roads: These alternately have been poor and excellent, at present writing are very bad, and no tourist traffic has been over them for some time, in as much as the various Rio Grande bridges are out, except at Albuquerque and Las Cruces, from flood waters. The highway between Willard and Estancia is under several feet of water in places but is navigable under pressure, and slow-careful driving. So far this year we have the average rainfall, and this month have passed the mark of 10 inches, usually for a year here. This present weather has been coldish, a return

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to winter. We are backsliders here, so our wild flowers are now much behind in their blooming dates.

Acquisitions: We received from Berkeley various repaired volumes of the Park Service Bulletin, herbarium folders, and, via Regional Archeologist Reed's office, three bundles of sherd storage boxes from Headquarters. Received from Washington a number of the 16 page information booklets which make our file on these complete.

Routine and Continuing Projects: We completed the calstomining of the bedroom and the painting of the woodwork in the small hallway and bedroom. Also waxed the floors of the bedroom, kitchen, and living room-office. Regular spring housecleaning was completed during this period, and we brought home the HCWP and new addition on May 10, so this monument's personnel is again complete. Erected two new signs, our last, to replace shotup state signs for the Mountainair approach road. Worked on the archeological survey material and herbarium specimens, and brought these collections up to date, also located and recorded two more archeological sites; Pueblo Colorado. Returned the two volumes to Tumacacori National Monument on the Puebla, Mexico, pottery and tiles. Learned on May 15 that our WPA project has been approved by Presidential signature, and took a day on official business in Santa Fe conferring with Works Progress Administration Zone Engineer and paving the way for the job, by justifications on a technical foreman, etc. Also consulted with Regional Offices on land easement for the telephone, which has necessitated further papers on this right-of-way. Obtained Mr. and Mrs. Jones Turners' signatures and worked further toward clarifying the title to the land, but at present writing am unable to proceed further inasmuch as Socorro is only approachable from Albuquerque and would necessitate two days travel there and back. The WPA project will probably begin around June 2. Called on the forest ranger in Mountainair and made arrangements for obtaining permit and place to cut the telephone stubs and poles for the proposed telephone line to this monument. Answered query for material concerning this monument and for pictures from Radio Station WSUI, Iowa City, Iowa, the material to be used in National Parks and Monuments information in Travel Talks by this station, have requested further information as to when and at what time material on Gran Quivira will be used. Sent off sample of cistern water for bacteriological count.

Projects for Ensuing Period: Work on organizing and beginning the WPA project is going to take up much of my time for this coming period, as well as taking care of any visitors coming our way.

General: This custodian took a half-day's leave to have some teeth fixed during this month. Mr. Robert L. Stephenson will probably be our foreman on the Works Progress Administration project, he has been working on archeological sites and material in Texas for the past year and is a graduate from Oregon University. The outfit will probably be hearing from him through his reports on progress in the Southwestern National Monuments Monthly Report, probably beginning next month.

CANYON DE CHELLY

By Charles D. Wyatt, Custodian,
Chin Lee, Arizona

Visitors this month, 106; travel year to date, 535.

Weather: On the whole the weather man left us a very agreeable string of weather this month. Only two heavy rain periods occurred with a total precipitation of 1.04 inches. The maximum temperature was 88° and the minimum 34°.

Administration: This monument was inspected on May 6 by the Chief of Engineering Oliver G. Taylor, who was accompanied by H. B. Hommon, Senior Sanitary Engineer of the Public Health Service and John H. Diehl, Regional Engineer. The major part of their time was spent going over the sewer and the water supply systems.

Charles R. Steen, junior archeologist and F. E. Stonehocker, mechanic, arrived May 22 after a somewhat strenuous trip through the mud. They came in via the Saw Mill and were about the third party to use that road this spring. Gene worked on the water pump motor, the fuel system of USDI 1258, and departed May 23 in USDI 1218. Steen will stabilize the White House Ruin, weather and flood conditions in Rio de Chelly permitting.

Mr. Ernest Knee, freelance photographer of Santa Fe, New Mexico, is spending several days on the monument taking pictures for a Canadian Club Whisky advertisement.

One trip to Gallup for freight and one to Albuquerque during the month for the purpose of interviewing candidates for the temporary ranger position were made by the custodian.

Maintenance : The big headache of the month was, and is at this writing, another plug in the sewer between the kitchen and the bathroom. A hole in the service porch floor didn't heal so the next attempt will be made in the patio. Poor rose bushes and lawn!

Signs were constructed in the "Jones Manner" and placed at the Bat Canyon Trail and Spider Rock turnoffs.

Twelve man-days were expended on road work during this report period. This work consisted of filling ruts and blasting rock from the main road. The condition of this road can be characterized by the Highway Shibolih "Dangerous but Passable".

Use of the Monument Facilities by the Public: Visitors; 1941--106; 1940--188.

Of the total visitors recorded above, all were shown the White House Ruins from the rim of the canyon, as the Rio de Chelly was in a flood stage nearly the entire month; running never less than one foot deep and usually two or three. Two hiking trips were made down Bat Canyon Trail and to Spider Rock Overlook.

Routine and Continuing Projects: Visitor guide and contact work will be carried on as usual. More signs will be prepared for the road into the Spider Rock Overlook. Stabilization work on White House Ruins will be carried on by Steen.

PIPE SPRING

By Leonard Heaton, Act. Custodian,
Moccasin, Arizona.

Visitors this month, 235; travel year to date, 661.

This month has been one of the fullest months of work and visitors I have had for some time. The only thing I can't like about it is that I did not get the work done on the Fort in April as planned, as I have been somewhat worried having visitors around while the men were at work and the place all torn up. As yet no accident has happened.

Weather: Again we have had some very unusual weather for May in this part of the state, being on the cold side almost the entire month. About a week ago we had frost that did some damage to early gardens and fruit, then snow and hail storms came this past week. A lot of west winds have come, Sunday bringing the hardest one for several years. It broke off a number of limbs from the trees, tore loose some of the old roofing paper on the residence building, and loosened the roof on the lean-to.

My record shows that we have had 10 clear days, 18 partly cloudy days, and two cloudy days. There were six days in which we got some storm, and today we have a cold north wind, clouds, and sprinkling of rain off and on.

Travel: Our travel to the monument has increased 500 per cent over that of April with 46 for April and 235 for May. The increase is due to classes from the near-by town coming out for picnics, and other groups to celebrate the winter work closing.

As part of the educational hike, the custodian took 50 young boys up to the Major Powell Survey Monument, back of the Fort, and then gave a lecture to the group in the Fort. There were 82 in this group.

Due to the condition of the Fort being torn up and in a state of stabilization, some of my visitors did not stay as long as they would have liked. Part of the rooms had to be closed to the public for a day or two on repair work. Al Kuehl visited me on May 2.

Roads: The roads for the past month have been in fair condition. The rains have not been so heavy but what the roads were open all the time. No work has been done east of the monument, but CCC work west of the monument has been going on all the time.

Repairs to Fort: On April 28 six CCC boys were assigned to the monument from the Grazing Service Camp four miles south, and work was started excavating the foundations of the Fort walls. On the east, west and north walls this excavation was carried down to bed rock or 10 inches below the foundation rock and then a concrete foundation was placed under the foundation rock and extended out four to six inches. Some of this has been tarred and back filled, but other parts have not dried enough for tarring.

While excavating at the north wall, we found that this wall was not a wall at all but just a lot of very poor sandstone and mud thrown together.

which we had taken out to get to the bottom of the wall.

The carpentry work has also gone somewhat slower than estimated due to the fact that the shakes are not first class material, being all thicknesses from 1/4 to 3/4 inches, not uniform in splitting or sawing, and not being sawed square at the big end, which caused the men to do a lot of trimming and throwing out.

We are able to save a lot of the original lumber so that there will not be much new lumber expended. Speaking of original, we found one of the old hand-cut shakes which shows plainly the drawing knife cuts. It is 3/8 inches thick and 16 inches long.

Nature Notes: For the past month I have not paid very much attention to the nature side of the monument, being kept so busy directing the work and visitors about the monument. I have collected a few plants and bugs, and have observed a few birds nesting. The old flycatcher is back at her old home under the porch roof and has four eggs and is setting, despite the confusion due to the stabilization work.

The grass is beginning to ripen and will soon become a fire hazard. There is evidence of another grass taking the place of the foxtail in the next few years, if it spreads like it did this spring. There is also more of the brush type of plant life getting a foothold.

Plenty of rodents are living on the monument at this time, and the mice just about eat us out of the home.

General: There is a lot of work to be done on the monument in maintenance that I have let go trying to get the stabilization on the Fort completed as soon as possible. I will start the boys doing other duties as cleanup and maintenance this week, so by the end of June we should have the monument pretty well taken care of.

SWNM

AZTEC RUINS

By Thomas C. Miller, Custodian,
Aztec, New Mexico.

Visitors this month, 1,005; travel year to date, 3,431.

General: May started with the loss of another "old timer" in the National Park Service, our former chief Arno B. Cammerer. We greatly regret the passing of the former director and friend. This distressing news came to us on April 30 by telegram from Regional Director M. R. Tillotson who had also served under the former director for many years. Cam was a tireless worker who sacrificed personal considerations to his work.

Our travel shows a large increase over May, 1940. While flood conditions over the state caused much damage to property and loss of life was severe, our visitors continued to come in. The rains continued in this section of the state but the damage is not too severe as yet.

Weather: Maximum temperature 87; minimum 34. Total precipitation 4.7.

inches. May is normally a dry month, but this month has brought more than a third of the average annual rainfall.

Monument Inspections: Newton B. Drury, Director, National Park Service, Washington, D. C. and party were in and inspected this national monument on May 16. Accompanying the Director were M. R. Tillotson, Director, Region III, Jesse Nusbaum, Mr. G. W. Olcott from Santa Fe, and Mr. and Mrs. D. McDuffie from Berkeley, California.

Chief Engineer Taylor, Regional Engineer Diehl, A. van V. Dunn, and Sanitary Engineer Hommon were also in and made an inspection.

Engineer Willard Bradley stopped for a short visit en route to Santa Fe. Branch of Planning L. V. Randau, Custodian and Mrs. Jack Cotter, Tuzigoot, and Lewis and Carolie McKinney, Chaco Canyon New Mexico were also monument visitors.

Hovenweep and Yucca House National Monuments: These monuments were inspected on May 14. Hovenweep travel since December 1940 has been 110 persons estimated, more than half of that number signed the visitor register before some visitor or shepherdor borrowed the pencil from the register box early in April. The roads were in good condition, but the ruins have suffered this past winter due to excess moisture.

Yucca House Travel: Eighteen persons visited the monument during the month of May. This figure was handed me by Mrs. Houston Ismay who lives just across the fence from the ruins. One room that apparently has an original ceiling intact collapsed in the center portion of the ruins.

Personnel: Custodian Miller was absent on annual leave one day during the month. Ranger Hastings was on sick leave three days during the month. The custodian and ranger completed 20 class hours at the First Aid School that was conducted by the State Police Department during the month. We should be better qualified to render first aid in case of accidents.

Projects; Routine and Completed; Projects for Ensuing Month: Guide and contact work has and will be continued. Heavy increase in travel has almost doubled this work. Grounds and buildings have been maintained, electric lines repaired and shorts eliminated. Public contact work will probably take most of our time during the ensuing month.

Use of Monument Facilities by the Public: A total of 1005 people arrived in 192 cars coming from 31 states, the District of Columbia, Panama, and Canada. Total ticket sales, 320; annual permits 1; revenue collected \$80.50. Eight-hundred and ninety-six people were guided through the ruins in 110 trips and 860 people were guided through the museum in 107 trips. One-hundred forty-eight hours and 20 minutes were spent on guided trips. Four hundred and thirty school children were monument visitors coming from the following schools: Shiprock Indian School, Ignacio Indian School, Ft. Defiance Indian School, Dolores High School Seniors, Toadlena Indian School, Chinle Indian School, La Plata School, Aztec Grade School, Bluff City, Kansas, High School, and Falfa, Colorado, Grade School.

CASA GRANDE

By A. T. Bicknell, Custodian,
Coolidge, Arizona.

Visitors this month, 1,160; travel year to date, 14,750.

Weather: Cool weather continued on through the month of May at Casa Grande Monument with a maximum temperature of only 103 degrees and only eight days of the report period exceeding 100 degrees. Maximum temperatures were reached on the eighth and ninth, 103 degrees, with the minimum of 45 degrees coming on the twentieth. The cool weather has been a great help in keeping our visitors coming this year.

The month began with a good rain storm bringing a total of .71 inches. This amount exceeds all the rain received during May for the past six years, that amount totalling only .33 inches.

Use of the Monument by the Public: Visitors this month--1,160; May 1940--619.

Visitor travel for May, 1941 continued the example set by preceding months with a gain of over 87 per cent. Many of our visitors remarked that they had expected to suffer from the heat and were much pleased at the continued mild weather. Visitor contact total for the month was 1,414.

Ticket sales for the month numbered 737 for \$184.25, as compared with 452 tickets last year for only \$113.00. We checked on 190 people who did not buy tickets yet spent some time in the museum. In addition to this number, there were 284 people who took the ruin trip who did not receive guide service in the museum, giving a total of 474 unattended museum visitors. Visitors receiving no guide service of any kind numbered 311. Our picnic facilities were utilized by 179 people in 42 parties, the biggest day being on May 11, when 78 persons used the grounds. On that same day, only 45 people made the ruin trip, proving our contention that many of our local people come only to use the picnic grounds and not to see the ruin. Runarounds for the month numbered 172 in 49 cars, people just "taking a quick look" from their cars as they drove around the parking circle.

Arizona and California contributed well over half of our visitors with 255 from Arizona and 246 from California. Eight states were not represented this month but we had visitors from the Philippine Islands, China, Hawaii, Mexico, and Greece.

Visitors of Special Interest: 4/25/41 Mr. S. J. Schwartz, of Phoenix, with the Travelogue party of the Southern Pacific Railroad.

5/14/41 The Famous Topperweins, "Worlds Greatest Shooting Team", visited the museum and ruin.

5/22/41 Mr. E. B. Sayles of Gila Pueblo with Sr. Alberto Ruz of Mexico City.

5/24/41 Director Newton B. Drury, Regional Director Miner R. Tillotson and Mrs. Tillotson, Mr. and Mrs. MacDuffie of Berkeley, California, and Mr. J. Manuel Corona and Mr. Carlos Villa Perez, both of Mexico City, members of the Mexican Commission on the proposed Coronado International Monument.

Natural Phenomana: Our ocotillo have almost finished blooming for this year, and the prickly pear and cholla have completed their flowering. The grasses are drying up rapidly and for the first time in many years we have a possible fire hazard because of the luxuriant growth on the monument this spring. Many of the mesquite trees we thought completely dead are putting forth green leaves.

Alas! we come to the sad part of our report. The owls have left the ruin! About two weeks ago they moved away, taking their four babies, and have not been seen since. It is hoped that it will be only a short vacation.

Maintenance: New gates for the entrance to the ruin and one of the signs previously ordered were delivered by the Mt. Elden C.C.C. camp. The old sign at the entrance gate to the monument was removed and a new one installed.

Trouble occurred again with the sewer pump, with Geno having to pull it from the well to free the top bearing. Minor jobs were as follows: A clogged sewer from Parke Soule's quarters was opened, toilet flush valve was replaced in Superintendent Miller's quarters, the roof of the bachelors' quarters was repaired and Gene also repaired their reading lamp, new shutter supports were made and installed on the custodian's quarters, a filing drawer lock and screen door adjusters were repaired on the headquarters building, the large entrance sign at the highway entrance was repainted as well as the flag pole in front of the museum, and the directional map and posts on the "Desert Trail" were repaired and painted. Calimine was touched up in the headquarters office and the stove removed for the summer. Two olla stands in the museum were repaired and repainted. A general cleanup of the entire headquarters area was also made. The status on the headquarters addition remains the same as previously reported.

Junior Archeologist Steen completed the work of backfilling Compound F, on May 10, using 29 man days. With funds still restricted, no new projects can be started and our labor will be restricted to further cleanup and the usual contact and guide work.

SWNM

TONTO

By I. John Peavy, custodian,
Roosevelt, Arizona.

Visitors this month, 1,701; travel year to date, 7,158.

Weather: Usually about this time of year weather makes the greatest mental and physical impression on us here at Tonto. While it has been slightly warm here so far, the temperature has been moderate. As a result, travel keeps up. Tonto is in the upper brackets, at least, where visitors' interest is concerned.

Visitors: Of the 1,701 visitors coming in 441 cars, 358 were from out of state. This is an increase of 352 per cent over last year. 768 people

visited the Lower Ruins, and 25 individuals made the trip to the Upper Ruins. Out-of-state travel is holding up very well, considering that the summer season is at hand. April 27 was the biggest day this month with 414 arrivals. Tad Nichols of Tuscon visited the Lower Ruins on April 28 and Mr. and Mrs. Russ Hastings, old friends of the Park Service, came in on May 3.

On May 15 the girl scouts from Benson, Arizona, visited the Lower Ruins. On May 24 I conducted 11 girl scouts from Miami on a nature and archeological trip. On the trip we identified 30 flowering plants and observed 10 species of birds, and instructions for pressing and mounting flowers were given.

Visitors from Other Government Agencies: Stanton Wallace, District Forest Ranger at Payson, Arizona, with his family visited the Monument May 4. Incidentally, Stanton is one of my former schoolmates.

Roads: I took Ford pickup 1243 to Headquarters to be overhauled May 5, and returned with Ford dump 1219. During the rest of the month I have spent seven man days working on the entrance road. I have hauled 90 yards of surfacing, and the roughest spots on the road have been repaired through the cooperation of the State Highway Department. I am allowed to use their caterpillar and loading pit. The loading pit is located two miles from the monument, so transportation of surface material is comparatively easy.

Trails: The trail to the Lower Ruins is in fine condition. This is due to lack of precipitation and heavy travel over the trail during the past month. This month we have had two light showers which facilitated surface packing by visitors.

Projects for Ensuing Month: Guide service will continue as usual. Improvement of the entrance road will be continued whenever time permits.

===== SWNM =====

SAGUARO

By D. W. Egermayer, custodian,
Route 2, Box 544, Tucson, Ariz.

Visitors this month, 1,235; travel year to date, 12,307.

Of the 1,235 visitors this month, arriving in 432 cars from 33 states, D. C., France, and Mexico, some 233 persons, in 93 separate parties were contacted at the monument headquarters, for a total time of 2,280 minutes. Forty-four persons were counted in the picnic area, and two parties made the trip to Manning Camp Ranger Station, spending at least one night on top the Rincon Mountains.

The custodian made two pack trips to Manning Camp, the first, on May 1-3 for the purpose of installing the fire lookout (most of the trip was made in a snowstorm) and the second, May 15 and 16, was primarily for

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the purpose of taking supplies to Lookout Harris, and to make the first of the regular, bi-monthly, lookout inspections. Two days annual leave were taken during the month. One official trip was made to Headquarters, on May 9, to have a trailer-hitch installed on the Saguaro pickup, to rebuild the broken road-drag, and to build a "J" type radio antenna for installation at Saguaro. The new fire-weather danger station was put into service on May 3, but not until the 13th, when twice-daily radio contacts with Mt. Bigelow Lookout (U.S.F.S.) were begun, were we able to receive the weather reports, since we have no telephone connection to the station. Superintendent Miller visited the monument twice during the month, but on both occasions the custodian was elsewhere on official business and missed him--sorry Hugh. Regional Attorney Sroaf also visited Saguaro, and we are hoping he can untangle some of the very complicated land situations at an early date.

One day was spent in filling in two dips on the loop road--these have been rough for four months, but only on April 30 did the two small creeks stop flowing across the road at these points so that fill material could be kept in place. The new "J" type radio antenna suggested by Radio Engineer Hilgedick was constructed, and permanently installed on the roof of the station, replacing the makeshift aerial used last year; the new one functions about 50 per cent better. The entire Manning Camp area has been cleaned up by Lookout Lloyd Harris, and a 15 foot fireline constructed completely around the cabin, barn, and corral. In addition, during the first two weeks on duty, when fire danger was low or dormant, Lloyd began brushing out the patrol loop trail between Rincon Tower and Mica Mountain Lookout; about $1\frac{1}{4}$ miles of the five-mile trail was completed before moderate and high classification of fire danger forced him into the tower on full eight-hour shifts. In spite of the very wet winter and spring, we have already had four days in the "High Class", and one of these was almost into the "Extreme Class", with a 36 mile wind, and 82 per cent danger rating--higher by far than anything we had all last summer. Due to the abnormally heavy rains, even here in the desert area of the monument, a very serious fire hazard exists, due to the dense, dry, vegetation. A lightning storm on May 24 caused the first fire of the season in this portion of the state, some five acres being burned on the Coronado National Forest south of the monument.

Projects for the ensuing month, as now planned, consist of continuing fire-presuppression work, and contacting the ever-decreasing number of visitors coming to Saguaro, as the warmer days continue to cut into our travel.

SWNM

EL MORRO

By R. R. Budlong, custodian,
Ramah, New Mexico.

Visitors this month, 48; travel year to date, 223.

We were growing optimistic, thinking summer had arrived during the
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month, and so it did--for a week. Now the furnace fire is going again, snow fell on two occasions during the week, and at this writing the second thunderstorm of the day is bombarding the rock with rain and hail, and it is a Sunday with no visitors.

Weather: We thought last month was wet, but this has been wetter. Total moisture, 2.68 inches, most of it rain. Snow fell on three occasions, to a depth of 2.5 inches. Maximum temperature for the month, 83 degrees, on May 10; minimum, 28 degrees, May 20.

Roads: Can't describe them here--the postal authorities would cause trouble. Ask any visitor who arrived here during the month, and you'll get the answer. The road to Gallup has been passable now and then. It isn't now. During the month one visitor tried reaching Highway 66 via Grants, against this office's advice. The custodian called him via short-wave radio that night in Albuquerque to see how he had fared--cost of repairs to his car for damage sustained in the 40 miles between here and Grants totalled \$22.75. This road of ours is a State Highway, you know. Federal Communications Commission's regulations were not violated during that conversation, but were considerably strained, and the air was blue for miles. We considered the road pretty good that day. It has really been rather bad most of the month, and for the past six months also.

Trail: Work on this, by the custodian, has taken most of his time during the month. We received advice that the sum of \$50 was made available for trail work, but so far it has been possible to obtain outside labor for only half of one day. The trail was in bad condition. The custodian stepped through the trail in two spots during the month--seepage (young torrent) of water under the dam caused settling of the trail. It will continue to do so until we get a dam that will hold water. The present one just filters out the larger of the drowned animals. On the north side one large rock shifted about two inches during the month, and will eventually fall unless we can get funds to do considerable bracing; such fall would spoil part of the trail. Weeds shooting up through the trail surface have caused the custodian many headaches and much work. Best solution to date seems to be to cut the sprouting stalks, pour on a half-teaspoon of salt, and tamp the asphalt back in place. On warm days it isn't quite so simple; you work hard over a hundred feet of trail, removing all growth through it, and then at the end of the day look back over that portion of the trail and wish for a lawnmower--the sun brings growth through the trail with astounding rapidity.

Visitors: We had some, in spite of the weather. There were 48 of them, arriving during ten visitor days. All received guide service to a total of 2,535 minutes. Mr. Joseph A. Bursey and party arrived May 20, to obtain photographs of the area for publicity purposes; some of our typical weather arrived about the same time, and picture-taking was indefinitely postponed.

General: Most of the month has been spent working on the trail and grounds.

Office work is therefore not quite current, but we expect to get caught-up before long. During the month 15,000 copies of a 16-page illustrated pamphlet on El Morro, prepared by the custodian, were received.

We have been unable to obtain the services of a per diem guide, and hope the two rangers, due June 1, may arrive soon. Much work must be done, and visitors should begin arriving in considerable numbers whenever roads remain open.

Repair parts for the official truck have been obtained, and we hope to have it in running condition soon. Rumor reaches us that Gene Stonehocker may be sampling some of the Ganado mud--come down and see us, Gene--we'll show you some real mud. And I ought to know, having spent some years in all the mud-puddles in both the Ganado-Chinle and El Morro areas. Ours down here is of supreme quality; there is really no comparison between the two.

This has been a long winter. The custodian has managed three trips to town this month--the first since December of last year. I imagine it is rather hot down at Headquarters now--this thought is occasioned by the HCWP coming into the office at this point to remark that the house is growing cold, and will the custodian please stoke the furnace and turn on the drafts?

SWNM

TUZIGOOT

By Ed. Alberts, Relief Ranger,
Clarkdale, Arizona.

Visitors this month, 717; travel year to date, 4,892.

General: Conditions are good at Tuzigoot. Travel shows a marked increase over that of May last year. Weather has been generally fine, with roads in fair to good condition. High spot of month was the visit of Director Drury and party to the monument. Custodian Cotter has been absent most of the travel month on annual leave with the writer relieving him.

Visitors: A total of 717 registered visitors arrived at Tuzigoot. Probably this total would be increased by another hundred if those uncontacted and unregistered folk who arrived after hours were to be counted. Of 221 vehicles registered here, over half were from states other than Arizona. Travel for May, last year, was but 314; an increase of over 100 per cent is therefore evident. However, this month's travel is less (by 20%) than that for April just passed. This mid-season slack was noticed last year, and perhaps represents a definite travel trend. Unsettled weather during part of the month, and the deterioration of the Oak Creek Canyon highway, doubtless affected travel adversely to some extent.

Weather: No official readings are made at this area, but unofficial readings of 95 degrees as maximum, and 40 degrees, as minimum were noted. Several rainstorms have made themselves evident--one duster occurred in

mid-May, and a choice thunderstorm paid Tuzigoot a visit May 25, when several well-placed lightning-bolts plunged the monument in darkness for over 24 hours.* Fortunately the weather's mildness has kept the museum furnace idle for several months, but severance of power in mid-winter would have been decidedly embarrassing. A few days were spent with the monument immersed in dense smelter smoke, which did not add to the visitors' interest or enjoyment to any appreciable degree.

Monument Inspections: On May 4, Regional Attorney Sroaf, Architects Kuehl and Krueger, and Assistant Superintendent Richey inspected the monument, and the facilities. Chief of Engineering Taylor, Sanitary Engineer Hommon, of the Public Health Service, and Regional Engineer Diehl paid a brief call on May 8. On May 23, right on schedule, Director Drury, Regional Director Tillotson, and Superintendent Miller inspected Tuzigoot. On all these occasions, unfortunately, Custodian Cotter was absent on leave--approved and scheduled long ago--and Relief Ranger Alberts played the part of custodian, pro tem.

Projects Completed: The NYA program has continued, and has permitted certain work to be completed. A temporary trail to Unit VI--the "lower ruins"--has been built, permitting super-interested visitors to see these interesting units without necessity of scrambling over rough rocks, and wading through fox-tail and Russian thistle. The oiled path to the main ruins has been patched, with ravelled edges repaired, and with a portion of the worst of it re-surfaced through a method recommended by the Regional Office. Many thanks to Custodian Jones of Wupatki, for cheerful loan of a drum of bitumuls for this purpose. Most of the unsightly cement drains in the ruins have been camouflaged and repaired. The bulk of the rooms have been cleared of weeds. Stabilization work has been largely halted during Custodian Cotter's absence, in order that his professional training as archeologist might be used in supervision of this delicate and important work. Standard filing system has been instituted in the office, and with a few days of cross-referencing, this project will be completed.

Museum and Interpretation: As shown on regular forms submitted with this report, 141 conducted trips through the ruins, and 176 museum talks were given to the monument visitors. The writer has again been impressed with the number of travelers to whom Tuzigoot represented their first Indian Ruin. It appears that this area would be an excellent place for an orientation exhibit to "advertise" the other archeological areas in the Southwest. A large segment of the visitation here seems to be made up of Californians who have followed US 60, go through Prescott, and then pass this monument by chance, having been lured by the relatively new "US 89 alternate" markers on old State Route 79.

SWNM

*.See Personnel Notes.

WALNUT CANYON

By Paul Beaubien, custodian,
Flagstaff, Arizona.

Visitors this month, 796; travel year to date, 3,419.

Of the 796 visitors, 407 were not contacted, and it is estimated that 250 visited the cliff dwellings unattended. Some were contacted more than once, giving a contact record of 64 per cent.

Park Service visitors included Dale King, Raymond Sroaf, Oliver G. Taylor, J. H. Diehl and Harry B. Hommon. Dale King worked on the museum plan while here, and Raymond Sroaf was concerned with easements for the proposed power line.

The weather has been cold, wet and windy, resulting in fewer visitors and a late spring. The oak trees are leafing out two weeks behind schedule.

There were no CCC enrollees in camp during the first part of the month, but with the arrival of a new group, three boys have been assigned to contact duty. If warm weather ever comes, bringing visitors, we should be able to meet most of them.

Routine and Continued Projects and Projects for Ensuing Month: Taking care of visitors and the facilities.

SWNM

MT. ELDEN CCC

By Bill Stevenson, proj. supt.,
Flagstaff, Arizona.

Company 3838 arrived at Mt. Elden May 10 and work was resumed on projects May 12. Company strength 133.

Entrance road is now 100 per cent complete, and grading 75 per cent complete for parking area. Work has been resumed on Administration Building and plastering has been completed in office and work room. Clearing has been finished on approach road. The long awaited repair shop was furnished by the army this month.

Wupatki: The side camp resumed operation May 19.

Excavation was completed for drain from basement of Administration Building.

Visitors for the month included: The Director, National Park Service, The Regional Director, National Park Service, Mr. Hugh M. Miller, Superintendent, Southwestern Monuments, Mr. Duncan McDuffie, Assistant Superintendent Charles A. Richey, Associate Landscape Architect Kuehl, Architect Krueger, Field Auditor Jules LaVergne, Inspector Taubert, Coolidge Office Clerk Gastellum, O. G. Taylor, Chief Engineer, National Park Service, J. H. Diehl, Regional Engineer, Harry Hommon, Sanitary Engineer, H.A. Montgomery, Associate Engineer.

SWNM

WHITE SANDS

By Johnwill Faris, custodian,
Alamogordo, New Mexico.

Visitors this month, 5,664; travel year to date, 34,117.

May, in spite of heavy rains, floods, etc. has been a very good month with 5,664 people in 1,093 cars. Unusual weather conditions have probably slowed down our regular visitor flow, but a heavy use of our area by Fort Bliss personnel has put us considerable ahead of last year.

Some time during the early part of the month was spent in going over land problems and looking up boundary fences etc, and I see where definite steps are being taken to settle this once and for all. Other monument inspections were made in accordance with routine administration.

It has been possible to do some painting and much remains to be done. The unusual weather has brought with it problems on our road with both wind and moisture, but long hours and hard work has put Joe ahead of them both.

The boys have kept up a good average of contacts especially with the groups from the various schools. In the past ten days we have had 21 groups from six states totaling 516 children. This probably could have been increased many fold, but as you know we were a little hazy on how to handle these groups and with the thought of a possible charge we sent out no invitations at all.

One of our most important steps of the month is the installation of our museum case lights. This will be the first time we have been able to give the museum a chance at all, and we are expecting much favorable comment.

We had a visit from Hugh Miller, Mr. Taylor, Mr. Dunn, Mr. Hommon, and Mr. Montgomery. These men studied some of our problems and we profited very much from their visit.

A broken oil line has caused us considerable trouble with the light plant and in the securing of new parts.

Next month we hope to keep up with our schedule on general cleanup visitor contacts etc. Many things will have to await July 1, and some funds.

We are also looking forward to your visit with the Director.

SWNM

ORGAN PIPE CACTUS

By William R. Supernaugh, custodian,
Ajo, Arizona.

Visitors this month, 900; travel year to date, 8,380.

General: Travel to this area is starting its normal spring drop, but due to the article on Organ Pipe in last month's "Arizona Highways" quite a lot of people are turning from the paved roads to see what its all about down here. No real hot weather has arrived yet, but may be expected most any time now.

Once again we are going to try for water in the last well. The funds provided should complete this project within the next two weeks so that we can tell how good our last guess was. Drilling will be started in the last hole at a depth of 160 feet, where it was stopped when funds were exhausted last time.

With the closing of the Grazing Service CCC camp near Ajo, the side camp at Bates Well belonging to this camp was moved out during the month. I had hoped to retain this camp and did not know that it was to be moved until work was started.

Routine work and patrol has taken up all time this month so that there seems very little of a report to write. One trip on my day off was made to Headquarters on business.

Wildlife: Whitewing Doves have arrived for their summer stay in large numbers. I believe that a great many more are nesting here than last year so that it seems protection is showing results with both doves and quail as increases are quite noticeable in both.

Several bands of Bandtail Pigeons have been seen this month. These are the first sighted since I have been on the area. This is probably due to the feed conditions which are ideal for bird life this year.

Gila Monsters, also, are seen frequently this year, while none were noted last year.

Feed for all wildlife is still good and water is plentiful, but since the dry weather has started things are beginning to show the results and dry up.

Projects for Following Month: At least the next two weeks will be mainly taken up with well drilling and water development. This is the only special project under way so that the rest of the time will be on patrol and the usual administration of the area.

—SWNM—

TUMACACORI

By Louis R. Caywood, custodian,
Box 797, Nogales, Arizona.

Visitors this month, 724; travel year to date, 6,906.

General: May has been a normal month as far as the weather has been concerned. With the coming of summer the days are warming up considerably. There have been a few windy days and some cloudy weather.

Visitor travel has dropped 40 per cent from last month, but is almost 60 per cent over the travel for May, 1940.

Use of the Monument by the Public: A total of 724 visitors were conducted through the mission ruins and the museum. Of these approximately 200 were Arizona residents. In addition, 420 persons in 102 cars in some way used the monument facilities.

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Eight organized groups totaling 182 persons were conducted through the ruins and museum. These included university students, private school and public school children, and church and private parties.

The Archaeological and Historical Society of Tucson, Arizona, held its annual outing and picnic at Tumacacori the evening of May 19. The group brought picnic lunches and the custodian and HCWP furnished coffee. A few Nogales people also attended. Father V. R. Stoner gave an interesting illustrated lecture on the Arizona missions.

Mr. and Mrs. Fred Winn and party were visitors on April 30. Mr. Winn is supervisor of the Coronado National Forest and was conducting a group of Forest Service officials through his area.

Mr. Johnson Neff of the Fish and Wildlife Service and Game Warden Peterson of Santa Cruz County were visitors on May 22 for one hour discussing birds and especially the White-Wing Doves. Mr. Neff is completing a five year study of the White-Wing Dove.

Park Service Visitors: On May 24 Director Drury, Regional Director and Mrs. Tillotson, Assistant Superintendent Richey, Inspector Taubert and party were visitors. The remainder of the group were Mr. and Mrs. Duncan McDuffie of Berkeley, California, Sr. J. Manuel Ceron and Sr. Carlos Villas Perez, both of Mexico, D. F.

Luis Castellum of the Headquarters office was here on May 18 to say hello. Luis was visiting his parents at Tubac.

Maintenance: Routine maintenance of restrooms, museum, mission, and grounds was carried on during the month. In addition to regular maintenance and weed cutting, two signs were relocated. The warning sign was removed and the letters were painted a dull black as they had faded considerably. This sign was then placed where it is more easily seen and read by visitors as they go from the museum to the mission. The entrance sign at the museum door was lowered to $8\frac{1}{2}$ inches from the ground line, five feet from the museum building, and two feet from the south edge of the brick walk.

The service entrance gate which has been completed for several months was finally placed by the custodian and ranger. The gate was made on the same design as the main entrance gates and it adds a final satisfactory touch to the parking area layout.

Oil was changed in the well pump. This is done only annually but from the looks of the oil this time it was very dirty and should be changed more often.

Museum: Case No. 26 was opened and two temporary labels prepared by the custodian were inserted. This case has never had any label copy to explain the pictures describing the excavations at Tumacacori in 1934 and 1935. Visitors now spend considerably more time in front of this exhibit than formerly.

*** SWMM ***

MONTEZUMA CASTLE

By Earl Jackson, custodian,
Camp Verde, Arizona.

Visitors this month, 780; travel year to date, 4,211.

Three complimentary passes were issued, 267 tickets sold, and 65 children entered the Castle free as under age. A total of 335 persons entered the building. Visitors arrived in 236 cars, of which 87 were Arizona cars, and four came on foot; 30 states and Washington, D. C. were represented, as well as Mexico, France, England, and Ireland.

Newsworthy Visitors: April 26--A class of archaeology students from the University of Arizona, six in number, came in under the direction of Instructor Ned Spicer.

May 4--Assistant Director and Mrs. Eddie McKee and family, of the Museum of Northern Arizona, were interested visitors.

May 14--The fifth grade of the College Elementary School in Flagstaff paid its annual visit to the Castle, under the direction of Miss Ivernia Tyson; 32 persons were in this party.

May 25--Dr. Slypher, of Lowell Observatory, Flagstaff, was in.

Park Service Visitors: April 27--Associate Engineer R. R. Maxwell. Also on May 13.

May 3--Relief Ranger Ed and Carey Alberts.

May 5--Assistant Superintendent Charles A. Richoy, Associate Architect A. C. Kuehl, and Assistant Architect Charles Krueger. On this day also arrived Soil and Moisture Fence Foreman Wesley A. Mullenau.

May 8--Chief Engineer Oliver G. Taylor, Sanitary Engineer Harry Hommon, Regional Engineer John H. Diehl.

May 23--Director Newton Drury, Regional Director and Mrs. Minor R. Tillotson, Superintendent Hugh M. Miller, and Mr. and Mrs. Duncan McDuffie, of Berkeley, California.

May 25--Headquarters Mechanic Eugene Stonehocker.

Weather and Roads: Weather has been mild, with a little more than normal amount of gusty, windy days. Rainfall was .48 inches, with five cloudy and 11 partly cloudy days. Maximum temperature was 96, minimum 41, with a mean maximum of 82.96, mean minimum of 47.80.

All incoming roads are now open, and most of them in pretty fair condition. Three miles of approach on our main route, the road via Cornville to Highway 79, is being gravel-surfaced preparatory to oil coating, and is slow and causes some comment.

Routine and Continuing Projects: Park Archaeologist Dale King was with us until May 19, working on museum case installation. At the time of his departure, case installation and furring in of cases, painting and calsoning, were practically complete. Since his departure the custodian and ranger have devoted all available spare time to working on completion of these tasks and preparing temporary exhibits.

Little aside from museum work was done by the regular staff this month.

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except for normal contact duty. One day was spent in cleaning out the septic tank, which had several cubic yards of river sand in it.

On May 6, Wesley Mullenau, Soil-and-Moisture Foreman, started construction work here on a fence to be built around the monument boundary. He has also supervised part of the work done on campground grading and building of a small loop road into the residence area, although when it was possible to be in attendance, Charles Krueger has been at hand to direct the campground work.

Two more days will complete the campground grading job, and will leave a nicely landscaped little development down there. Mullenau states 67 man days have been spent to date on that job, and that it has cost so far, about \$271.00.

Proposed Work to be Done in June: Continue with museum exhibits installation. Clean out gravel which has washed into culverts, enter herbarium specimens in new standard folders, build a paint shed, move and paint the weather station, and backfill 200 feet of trenches on top of a nearby hill where power ground wires have to be buried.

Publicity: Little has been done, because of lack of time. An article on hawks, prepared principally at night, was sent to the Regional Office for the Quarterly.

Miscellaneous: In general, things are running O.K. here. Travel is pushing along nicely, with a substantial increase in visitors; 45 picnickers and two parties of campers made themselves at home, as well as a large party of swimmers who frolicked in Beaver Creek here, half of yesterday. We anticipate a very busy summer season.

SWM

CHACO CANYON

By Lewis T. McKinney, custodian,
Chaco Canyon, New Mexico.

Visitors for this month, 118; travel year to date, 384.

General: Except for the trees the canyon probably looks as good this spring as it did several hundred years ago when the Bonitians landed here. We continue to have rains which keep the grass and other vegetation coming and these are the cause of many more flowers than usual for this time of year.

Personal: James C. Porterfield was entered on duty as guide May 18, and will work in that capacity until the appointments have come through for the temporary rangers.

Service Visitors: Director Newton B. Drury, George Olcott, Rodney Maxwell,
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CHACO CANYON (Continued)

Mr. Balch, Dale S. King, Erik Reed, Charles A. Richey, Mr. and Mrs. McDuffie, and Jess Musbaum, were official visitors.

We were very pleased to have Director Drury visit our monument. We did our best to sell him the place and believe he was well pleased in what we have here. We would very much like the director, as well as several other Park Service personnel, to spend several days in the monument to see what we actually have here. Official Visitors of the other Governmental Agencies were: Mr. Anthony, Land Utilization Division, Washington, D. C., Mr. Musgraves, Soil Conservation Service, Albuquerque, New Mexico, and Mr. Donley.

Stabilization: The Mobile Unit continues to stabilize the ruins of Pueblo Bonito and I hate to see them move out in July, as I understand they are planning on doing. The crews working on the part of the ruin that was damaged by the fall of Threatening Rock are progressing very nicely.

Maintenance: Fences continue to be replaced. Water gaps were replaced and two boundary fence gates completely overhauled. The connecting rod burned out of the light plant, and was sent to Gallup and new babbit run in, so now she's all lit up again.

Routine and Continuing Projects: Monument patrol has been carried on through the month on horseback. We have been bothered a lot by stock coming in through the arroyos since we have been unable to keep the water gaps in because of high water.

Radio contact has been carried on each morning with Custodian Budlong at El Morro National Monument. The radio sets have been working wonderfully even though we've had a lot of thunder showers and static.

Bids have been submitted for a well drilling rig to drill the proposed artesian well, but as yet the approval hasn't come through.

Equipment: The Ford pick-up continues to get there and back even though she has a few uncomfortable noises in her in'ards. I sure hope we get this four wheel drive pick-up before this winter sets in. The dump truck is still in running order, however, it needs several repairs and the tires are about as thin as my shoe sole. The light plant is in running order as I mentioned above.

Signs: There are still four road signs that are not set on the north road and we still have the combination signs for Chaco, Aztec, El Morro, and De Chelly to make.

Publicity: The noise that Threatening Rock made when it fell must have been heard all over the United States because we still continue to receive inquiries concerning it. If the road ever clears up I believe we will have a lot of visitors coming in to see what the little rocks look like. The last issue of the "New Mexico" magazine carried a story with some photographs which will also give us some publicity. I still contend that the best publicity we can receive is through satisfied visitors and that's the only kind we've had in the past. God Give Us ROADS!

Miscellaneous: Project Superintendent Phelps finally brought the new bride out to show her where she must live. She seemed to be quite interested in ruins so now we all understand why she married Herman. Mrs. Ross has returned from the hospital in Albuquerque where she underwent a serious operation. She's now up and around and feeling fine. Our three youngsters have returned from school and the quiet and still of the Canyon is broken for the summer. Kirk Clawson, wife and son have moved into the Canyon to operate the trading post for Mr. Tanner.

SWMM

CHACO CANYON CCC

By Herman Phelps, proj. supt.,
Chaco Canyon, New Mexico.

Work is progressing very satisfactorily considering the snows and rains and the very low company strength. Approximately 90 boys have been turned over to the work projects.

The rock quarry was temporarily shut down and the boys distributed to the other jobs.

The headquarter's road is going along very nicely, but we could do a lot better if we had more heavy equipment.

Soil and Moisture work is going along, but handicapped by the low company strength, thus cutting down on different jobs.

We had the pleasure of meeting Director Drury, of the National Park Service and party. Mr. Tillotson, Regional Director, Region III was also a welcome visitor. After lunch, the party was escorted through the ruins and over the proposed headquarter's site.

Other visitors during the month were: Mr. Maxwell, Regional Soil Conservationist; Mr. Balch, Junior Forester, and Mr. Uhlund, Engineer, Soil and Moisture.

Work was done on the following projects: Guide and Contact, General Cleanup, Boundary Fence, Maintenance of Roads, Maps and Models, Entrance Road, Section "C", Proposed Headquarters Road, Contour Furrows and Dikes, and Appurtenant Structures.

SWMM

MOBILE UNIT

By Gordon Vivian, Archaeology Foreman,
Chaco Canyon, New Mexico.

Emergency repair to walls damaged by the fall of Threatening Rock began early in April and has continued to date with an additional crew of 16, made available through the emergency appropriation. In general the damage to Bonito tends to be more extensive than was first realized from surface indications. Settling of the rock mass and recovery of the walls from the concussion has opened up additional cracks and extended

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those previously noted. Most serious is the depth to which surface cracking extends. Much of the previous capping in the immediate vicinity of the fall showed slight cracking. Removal of this, however, disclosed that longitudinal cracking in the wall below the capping was much more extensive than surface conditions would indicate. In some instances the exterior veneer had separated from the core a distance of 1 inch to 2 inches and in the four months since the fall, several new falls of facing have been noted.

To date all repair required to the west side of the fall has been completed and that to the east side is roughly half done. As far as can be told at present the necessary repairs will be completed by June 30.

To date a total of 31 walls have been repaired with the laying of 2,066 cubic feet of repair masonry of all types, patching, recapping, concrete cores and support.

In addition to the emergency repair the regular crew of the Unit has continued work in the southwest corner of the ruin and at Wijiji. Laying of tile and construction of weep holes and small plates brought the drainage program to completion in nine rooms while capping, patching and support have been completed in 24 others.

The program at Wijiji has just been resumed since it had been abandoned last fall. Three additional walls there have been repaired.

SWM

CHIRICAHUA

By Frank Fish, custodian,
Dos Cabezos, Arizona.

Visitors this month, 1,020; travel year to date, 5,725.

General: The weather has been mild and pleasant during most of the month, however, a few nights around the 21st were quite cool, getting down as low as 35 degrees. The maximum was 90 degrees on the 12th. A total of .78 inches of moisture was measured at headquarters; humidity has run from eight per cent up.

Visitors show an increase over the corresponding period of last year, 36 per cent were from out of state or foreign countries. One group of around 70 from the Pearce area picnicked on May 24.

The fire lookout was placed on duty the 14th; Ralph Pursley is doing the duties, the same as last year. Electric storms during the past few days have set several fires on the neighboring National Forest, mainly on the other side of the mountain.

The former CCC camp is being rebuilt and fitted for organized group camping and starts the season off today with about 70 Girl Reserves from Bisbee and Mexico. These groups will be given some of the natural scenic conducted trips through our area as such time the custodian has available. From the present run of visitors, we will welcome the temporary ranger for much needed assistance. Very few recorded contacts have been made during heavy travel hours, the custodian probably resembled a jumping jack more than an interpreter, popping in and out of the exhibit room to check cars,

answer questions and the like.

Visitor Statistics:

	<u>Cars</u>	<u>Visitors</u>	<u>Out of State</u>	<u>Camper Days</u>
1941	254	1020	208	43
1940	174	737	229	4
INCREASE	80	283	139	39

"Doug." Harritt, former temporary ranger at Canyon de Chelly camped overnight.

Lands: It is thought from conversation with "Pete" Winds, that our north-east corner extends onto his patented claim, Rex Plomo, about 300 or 400 feet. Pete is now working on his claims just north of the monument boundary and has several encouraging veins. (Lead and silver ore.)

Maintenance: Much of the month was spent shooting trouble on our 20 miles of telephone line, especially provoking without the aid of any form of a test set; preparing the lookout for occupancy, getting burros, and packing supplies, besides the regular maintenance of grounds, roads, trails, and buildings.

SWM

CAPULIN MOUNTAIN

By Homer Farr, custodian,
Capulin, New Mexico.

Visitors this month, 1,800; this year to date, 8,450.

The visitor business has begun to pick up this month in spite of the heavy rains and dark, foggy weather. Many, many school buses loaded with juniors and seniors and what not, from Texas, Oklahoma and Kansas have been rolling in. One college group from Colorado were visitors this month. No Park Service visitors have gotten up this way this spring, I believe they may think it is still snowing here.

Weather: Has been terrible all month, with fog, and rain, and wind. Very few sunshiny days during the past 30.

Maintenance: The road has demanded steady work all month clearing off rock and cinders. However, it is now in very good condition although it is quite narrow. I hope and expect to get this from 12 to 14 inches wider this coming month.

Routine and Continuing Projects: One culvert was reset during the month. The maintainer was put over the road about 12 times, many loads of soil were hauled filling broken places in the crusted lava or cinder bed of the road, and several hundred yards of ditches were cleaned along the road.

Wildlife: We appear to have a wonderful crop of squirrels but fewer rabbits than common. I presume the heavy snow was hard for the rabbits to survive. Our usual number of deer, bobcats, and porcupines are with us and doing nicely. Am wondering if Budlong's cat-spanker would work on my porcupines; if so I request the loan of it. Our eagles, hawks, and great horned owls are all raising their broods.

Flora: Undoubtedly we have the most glorious prospect for flowers and grasses than ever before in the history of this country. The base of the old Volcano will soon be a veritable wild flower garden, with at least forty varieties.

SWM

NAVAJO

By James W. Brewer Jr., custodian,
Tonalea, Arizona.

Visitors this month, 41; travel year to date, 174.

Eleven visitors registered while we made an inspection trip to Rainbow Bridge; all other visitors were contacted. There were 21 camper days.

Weather: Maximum, 84 degrees on May 11, minimum, 26 degrees on May 19; precipitation 1.19 inches. The long period of cloudy weather broke the first part of May, giving us a total of 11 clear days; the 18th an unusually strong wind blew, bringing below freezing temperatures, some snow, and more cloudy weather.

Roads: They have hit both extremes--too much mud and too much wind-blown sand.

Improvements and new Construction: We are happy to report the water system is in good running order; we took all the gadgets--solenoid and air vents--off the line and now operation is smooth and without air hammer. Each of the three air vents had a copper float in it and each float was crushed from the high pressure of the line. A safety valve was installed (375-lb pressure) in the line near the power house. Plans are progressing to improve the tunnel arrangement of the water system.

Seven new road signs were installed: Campground; Segi Point; Contact Station; and directional arrows; at what we call Hugh Miller Sand Dune we erected two signs, one at each end of the detour, designating wet weather and dry weather roads.

The road to the 15-mile marker on the Kayenta fork was dragged twice to cut down the high centers. A road and turn-around was cleared and dragged to the campground. The road at the parking area was widened by laying a rock wall addition to the arroyo crossing, and the parking area was enlarged.

A two-wire fence was strung on steel posts enclosing the rear of the residence.

The pits were dug and blasted for two pit toilets. The pit linings were assembled and installed. The toilet houses are assembled at the CCC camp and hauling and placing them is all that remains to be done (except painting).

The contact station exterior was finished with a suitable stain and "calking" job. A built-in register opens from the door and can be lowered, in our absence, to be available to visitors at all times. A bulletin board, glass covered, was also installed on the contact station; this gives information to visitors in our absence.

One hundred and ten juniper posts were hauled in and peeled; these are the posts Pipeline cut while we were on leave; they are suitable for part of the stockade fence shown in the Master Plan.

The walls and ceilings of the residence (badly stained from two winters furnace smoke) were washed.

Inspection: Inspection was made at Rainbow Bridge Nat. Mon. May 21-23. This area is in dire need of two picnic tables and two fireplaces. No vandalism has occurred since our last inspection trip.

The Seventy-Miles-From-A-Paved-Road-Monument: During the month we received itineraries advertising the arrival of the following Park Service personnel: Chief of Engineering Taylor; Senior Sanitary Engineer Hommon; Regional Engineer Diehl; and Director Drury. None of the above came to this monument.

Un-advertised but present were Jack and Virginia Cotter of Tuzigoot; they had written they were coming, but we met them and their letter on our way to town for much-needed supplies; unable to turn back with them, we gave them the key to the house and hope they made themselves at home--but we're still sorry we couldn't be here to have the fun of showing them around the monument.

SWNM

RAINBOW BRIDGE

Visitors this month, 26; travel year to date, 104.

So rarely do we have a report from Rainbow Bridge National Monument that the article "On the Trail to Rainbow Bridge" by Randall Henderson, on page 5 of the June, 1941, issue of "Desert Magazine", is especially welcome. We are particularly indebted to Mr. Henderson because he reported a travel party of 78 Sierra Club hikers who visited the Bridge in April, and also gave us hitherto unreported evidence that 3,323 persons were recorded at this monument since the installation of the register. This figure is of considerable value to us as a basis for making visitor estimates; our only method of reporting travel to this unstaffed monument.

SWNM

WUPATKI

By David J. Jones, custodian,
Flagstaff, Arizona.

Visitors this month, 315; travel year to date, 1,490.

Travel: In spite of frequent rains and cold weather during the past month there was an increase in travel of 15 per cent over the same period last year. As usual, the majority of the visitors came only as far as the Citadel Ruin where 222 persons registered. At Wupatki there were 170 individuals, of which 154 received guide service. A considerable number used the "back road" from Sunset Crater without getting stuck, as the recent rains have prevented the cinder from drying out. However, there was considerable complaint over the condition of the road and the lack of signs. More than 90 per cent of the total travel was from out of state.

General: On May 22 Superintendent Miller brought Director Drury for his first inspection of Wupatki. They were accompanied by Regional Director and Mrs. Tillotson and Mr. and Mrs. Duncan McDuffie. While we would have enjoyed a longer visit, they did have time to take a look at Wupatki Ruin and the developments that have been completed in the past three years.

The new CCC enrollees were not available until May 22, or about one month after the former company left for Washington. During this period quite a few of the administrative details were completed. With the assistance of Mr. Terence Harcourt of the "Coconino Sun" a broadcast was prepared on Wupatki National Monument for presentation over the station at Prescott, Arizona.

Local sheep men, Harris and Hall, have leased land from Mr. Bert Babbitt just south of Wupatki National Monument and are grazing a band of about 500 sheep. Because of the late spring rains, they have been able to obtain sufficient water from Coyote Spring for the sheep, but Mr. Harris is interested in using water from Heiser Spring.

Elizabeth White, a Hopi from Oraibi, visited Wupatki for the first time in search of evidence that would substantiate a Hopi legend that apparently refers to some of the ruins in this region.

NPS Visitors: In addition to the Director's party, Chief of Engineering O. G. Taylor, Harry Hommon, and Jack Diehl spent a portion of one morning inspecting sanitation and engineering matters. Assistant Superintendent Richey conferred with Al Kuehl and Chuck Krueger, of the Branch of Plans and Designs, on development matters. Dale King visited us on April 28 and May 13 with regard to the archeological excavations. Jim Brewer of Navajo came in to borrow the portable air compressor for Navajo.

Stabilization: Temporary stabilization measures were necessary at Wukoki Ruin to prevent any more of the weakened walls from collapsing. Supports were placed under all doorways and openings in the walls. No visitors are allowed within the ruin. In accordance with instructions, additional clay samples were sent to the Engineering Laboratory in Washington for determination of a suitable soil-cement mixture for ruins stabilization purposes.

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No further work was accomplished on the east wall of room 41.

Archeological Research: As mentioned above, there were no CCC crews available during almost the entire month. Excavation was started again on May 22 with a crew of four boys. Unless additional men can be furnished, our program will be hampered considerably. During the slack period it was possible to make an analysis of the work that had been completed. Cataloging is up to date, and the notes being recorded daily.

A small lump of prepared clay was found in site number NA 3916 which closely resembled clay used by modern Navajos of Wupatki Basin for making clay figurines. A portion of the prehistoric clay and a sample of that from the Navajo clay pit was sent to Professor R. K. Hursh of the Ceramics Laboratory at the University of Illinois for analysis.

Navajos: The Navajos have moved off of the Monument for the summer months with their sheep. Recently a "sing" was held at the hogan of Grandpost to thank the Great Spirit for the abundant rains of the past year.

SWNM

SUNSET CRATER

By David J. Jones, in charge,
Flagstaff, Arizona.

Visitors this month, 772; travel year to date, 3,000.

Travel: A total of 386 persons registered at Sunset Crater during the past month, which on the basis of previous observations would indicate a total travel of 772 persons. Out-of-state visitors made up 84 per cent of the travel.

General: Not included last month was the fact that the narrow portions of the entrance road to Sunset Crater have been widened and the entire surface graded. While this has improved the road considerably, it will rapidly deteriorate because it is not possible to cut deeply into the loose cinders and break through the packed surface without dire effects upon the unwary visitor.

Register boxes were completed by CCC camp NP-12-A and are in the process of being painted here at Wupatki. They will be installed shortly.

SWNM

BANDELIER

By C. A. Thomas, custodian,
Box 669, Santa Fe, New Mex.

Visitors this month, 651; travel year to date, 2,545.

Ranger Russell L. Mahan arrived at Bandelier April 30 and entered on duty May 1. Edward B. Davis of Santa Fe was hired as temporary maintenance

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man and entered on duty on the first day of May. Sylvester J. Keefe from La Jara, Colorado, was employed as per diem guide and entered on duty May 19. For the first time in several months Bandelier ceased to be a one-man monument. Heavy rains during the latter part of April and the first week in May prevailed throughout New Mexico making a quagmire of our roads and raging torrents of otherwise dry streams. The unusually heavy snows of winter began coming out about the first of May resulting in the most serious flood conditions that New Mexico has experienced for many decades. The camp, making a desperate effort to complete the building program at Bandelier before its termination on July 1, was hampered by being called away for ten days to perform emergency work on the levees to save the town of Espanola from floodwaters of the Rio Grande River. Except for brief periods of favorable weather, travel has been very slow. Our roads have been closed by floods for probably two-thirds of the time, 3.22 inches of rain falling during the month. This heavy precipitation, added to the moisture from the melting snows in the mountains, has caused Frijoles Creek and all of the waterways on the monument to be in flood stage for the past six weeks. Pajarito Canyon and Water Canyon, crossing our approach road on the north, have flowed heavily for two months. Our approach road from Albuquerque through the Jemez Mountains has been closed since last November. Prospects are that the snows will not be sufficiently melted for travel in this direction until the middle of June.

100 - Administration:

Monument Inspection: Harry Hommon, Senior Sanitary Engineer, and his party consisting of Engineer H. A. Montgomery, Mr. Dunn of the Water Rights Division, and Paul Fox, State Sanitary Engineer for New Mexico, visited the monument early in the month. Engineer Montgomery and Geologist Maxwell of Region Three inspected the water system at Bandelier and made recommendations for its alteration. Clerk Luis Gastellum of the Coolidge office and Auditor Jules LaVergne were monument visitors.

180 - Publicity: The custodian gave an illustrated lecture to the New Mexico State Tourist Bureau's tourist school during the month. Colored slides of Bandelier National Monument and the Headquarters reel "Glimpses of the New Mexico Monuments" were shown to about 50 people at this meeting in Santa Fe. More than two hours were spent lecturing and answering questions and discussing the National Monuments of New Mexico.

210 - Maintenance: Failure of our water supply system necessitated removal of Ranger Eden and his crew of six men to spend four days digging out the intake pipe in the filter bed, two miles above headquarters. A slotted intake pipe in the filter bed was found to have become so corroded that all openings were closed preventing water from entering the intake. Opening the slots in the metal pipe with chisels has temporarily bettered the situation. Engineer Montgomery has recommended that the intake pipe be replaced with slotted tile which will not corrode or rust. This project will be attempted as soon as the high waters subside. Ranger Eden has carried on his building maintenance program during the month although handicapped because of his men having to do flood duty. All of the old mud plaster was knocked

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from the walls of Residences Nos. 1 and 2 and completely replaced with hard lime plaster. Residence No. 4, now under construction, was plastered by Eden and his crew.

410 - Lecture and Guide Service: Sixty-two ruins trips accommodated 392 people in our interpretative program, 264 persons were guided through the museum on 31 trips, and 261 were not contacted. This seems to have been due to the fact that several large school groups picnicked in the canyon and did not desire to take the ruins trips. The monument on CCC Day had 200 visitors, but these were mostly residents of Santa Fe who had previously been through the ruins and, although guided through the work projects, did not take the ruins or the museum trips.

510 - Travel: Travel this month is off 30 per cent from the corresponding month of 1940. The extremely bad roads, floods, and rumors of floods experienced during this month make it surprising that we had any visitors at all. The State Tourist Bureau, however, reports that travel is up about 30 per cent for New Mexico as a whole. It seems likely that, had it not been for difficulties in reaching the monument, travel for May would have been much higher than normal.

530 - Newsworthy Visitors: Mr. James R. Garfield, Secretary of the Interior under Theodore Roosevelt, visited the monument during the month. Mr. Garfield had visited the monument several times many years ago and was pleased at the development which had taken place in recent years. Mr. B. A. Taussig, brother of the Taussig of anthropological fame of Harvard University and a member of the excavation party who began studies in Frijoles in July of 1908, visited the monument for the first time since he worked here 33 years ago. Mr. Taussig had been greatly alarmed by reports coming to him from various sources that the Park Service had built a highway up the middle of the Canyon and had erected hot-dog stands in the ceremonial cave. He came to the monument expecting to see it ruined from the beautiful spot it used to be. After viewing the developments, the road, and the fine manner in which the Park Service had planned its development and executed them, he had nothing but praise for the Service. His statement, "The Service has done an excellent job, and rather than spoiling the Canyon, has in my opinion enhanced its beauty". Mr. Taussig furnished us with many interesting anecdotes of his experience here in the Canyon and of the excavations of Tyuonyi and excavations attempted other places in the Frijoles nearby ruins. He has the negatives of a number of pictures which he took in 1908 and has promised to send them to us so that we may make prints of these old records.

620 - Fire Protection: Tools in the fire boxes were reconditioned and put in order for the season. Telephone lines have been overhauled and repaired during the month. Maintenance man Davis and Guide Geefe took the two-day training course in fire-fighting given by the camp this last week. Despite the fact that we have had an unusual amount of snow and moisture, high winds during the latter part of May quickly dried out the lower country and fire danger, according to our fire-danger meter ran up to high and extreme for a few days. Opening of the fishing season on May 15 drew many fishermen.

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to the upper crossing and the high country, but fortunately no blazes have occurred on the monument so far. One fire occurred on the Ramon Vigil Grant, north of the monument, May 16.

650 - Signs: State Highway Department has completely signed our approach road from Pojuaque to the checking station. Directional signs, highway markers, and signs warning of bridges and curves have been placed so that if our approach roads should ever be put into proper condition, they would be much safer than as previously signed. We certainly appreciate the co-operation given us by the State Highway Department in this signing program.

Routine and Continuing Projects: Ranger Mahan has aided a great deal in putting our photographic file in shape in conformity with the system worked out in Coolidge. During the month our map and plan file has been completely indexed and stored in the map case built at the Mt. Eldon camp. All miscellaneous publications, pamphlets, etc., have been classified and placed in file boxes and stored in the office. Considerable work has been expended in putting the ruins trail in good shape after a severe winter. The unusual amount of moisture this spring has caused a correspondingly heavy growth of weeds which, at the present time, threaten to cover Tyuonyi, Long House, and our other exhibits with a veritable jungle. Several man-days from the whole force have been expended upon this weed-control project, but a great deal more work will be necessary before the jungle is cleared away.

Projects for the Ensuing Month: Work will continue on the fencing project on the south boundary. Control of this project has been rendered very difficult because of the fact that roads through the high country to the south boundary are still impassable from snow. Floods in the Rio Grande River washed out bridges at Pena Blanca, Santo Domingo, and San Felice. During the latter half of the month it has been impossible to get to the fence project and to furnish the men with much needed supplies and materials. The middle of June should see this project completed. Breaking in the temporaries and getting our interpretational program to functioning will occupy a great deal of the time during the early part of June. Ranger Eden and his crew will continue the building maintenance program until the camp goes out July 1.

Visitor Comment for the Month: One of our visitors on a guided trip through the ruins observed the many evidences of early vandalism in the Canyon. His comment, "I see that you have a sign down at headquarters that dogs must be left in the car or put upon a leash. It would seem to me that you could turn the dogs loose and put your visitors on leash or make them stay in the car." Citizenship day was observed at the CCC camp to celebrate the founding of CCC on May 18. More than 200 businessmen from Santa Fe, parents of enrollees, and other interested people, visited the camp, were served a 5-course dinner, and in the afternoon all motored to the Canyon to view the work projects and examine the ruins. The 200 visitors walked right into the work project and then most of them took advantage of the offer for a guided trip through the ruins. They were taken the entire route to the Ceremonial Cave; contact about 2½ hours.

HEADQUARTERS

INTERPRETERS' REPORT

By Dale S. King, Archeologist
Coolidge, Arizona

PERSONNEL

Archeologist King spent till May 19 installing museum cases at Montezuma Castle, except for trips as follows: April 27-30, Walnut Canyon and Wupatki; May 5-7, Chaco Canyon (stabilization inspection); May 12-14, Walnut Canyon and Wupatki. On May 19 King proceeded to Prescott where he consulted with Raymond Carlson, editor of Arizona Highways magazine, concerning the current series of monument articles running in that magazine. He arrived at Headquarters at 2:00 P.M., May 20. A sinus operation forced him to take sick-leave for the remaining few days of the month. King inspected stabilization work at Chaco Canyon, and excavation operations at Wupatki National Monument. Only two were spent on the Walnut Canyon museum plan which did not make notable advance.

Archeologist Steens spent the first part of the month at Headquarters checking the Casa Grande archeology manuscript files, preparing copy for the Casa Grande two-fold leaflet, and supervising ruins stabilization on Casa Grande National Monument. On May 21 he left for Canyon de Chelly where the balance of the month was spent on ruins stabilization work on White House Ruins.

Naturalist Dodge was at Headquarters throughout the entire month carrying on office routine.

110 - NEW OR UNUSUAL ACTIVITIES

Suggestions were made for carrying out the first steps in inaugurating an interpretive program at the Chiricahua National Monument. See Chiricahua report for details. Following a request from this office, the Colorado State Fish and Game Department agreed to mark all National Monument areas in that state as closed areas on their game refuge maps.

412 - PUBLIC RELATIONS, PUBLICITY

Fifteen projection slides were loaned to Dr. Margaret Koenig of Omaha, Nebraska for duplication. Copy was prepared for the Casa Grande two-fold leaflet and submitted, with photographs, to the Region III Headquarters. Five sets of seven newspaper mats and captions were distributed to as many newspapers in New Mexico for publicity purposes. An exceptionally large number of requests for information and requests for photographs to be used in illustrating feature articles were answered. Three groups of office visitors made use of the bird Study Skin collection.

413 - EXTENSION SERVICES

On April 29 Archeologist Steen gave a talk to 17 members of the Gila County Archeological Society at Globe, Arizona.

INTERPRETERS' REPORT (Continued)

Several requests for illustrated talks had to be refused because of pressure requiring the staff members presence at Headquarters.

421 - PROGRESS OF EXHIBIT PLANNING AND INSTALLATION

Archeologist King and the staff at Montezuma Castle finished installing the museum cases, accomplishing the following: Temporary lighting hook-ups in all cases; furring of west wall of room A; masking of one door and window; changing door into workroom; plumbing of aquarium; shellac ing of all furring; application of muslin; repairing aquarium leaks; trimming with quarter-round and other finish; sealing old stains on plaster; re-application of batter strips; painting the whole job with casein water paint on muslin and oil semi-glass paint on woodwork. Two additional days were spent by King aiding Custodian Jackson in transferring exhibits into the new cases. It is regretted that more time could not be devoted to this task, for Jackson will find it difficult to ready his museum for the heavy travel season.

422 - LOANS, GIFTS, ACCESSIONS

Duplicates were received of the 43 ceremonial mask Kodachrome frames loaned by Seasonal Ranger Francis Elmore. Forty-seven mounted two-by-two projection slides were received from the Western Museum Laboratories. A number of back issues of the New Mexico magazine were received from the Flagstaff Public Library.

430 - STAFF RESEARCH AND OBSERVATIONS

As an aid to the Casa Grande Monument Staff, a number of nestling birds were banded.

450 - SWNM LOAN LIBRARY

Librarian Maria Monreal accomplished a number of much needed projects in the long-neglected library. Her report follows:

The following publications were received during the month of May: Seventy-two periodicals, 34 pamphlets, 11 books, 10 reports, and five re-prints. Fifty-eight books previously sent to the State Wide Library Headquarters at Tempe were returned, accessioned, catalogued, and with file cards completed, except for six which were incomplete and 31 which have previously been accessioned or catalogued and were checked by the library headquarters. Miss Monreal accessioned 153 books, lettered 713 books, processed (meaning pockets pasted, shellac ed, and catalogue number in its place) 456. One-hundred-twenty-one books were shelved, and loan cards typed for 380.

The usual number of loans and returns were handled.

460 - SOUTHWESTERN MONUMENTS ASSOCIATION

In Executive Secretary King's absence, only routine work was carried on. All activities were kept current.

470 - PHOTOGRAPHY AND OTHER VISUAL AIDS

With the use of the Region III camera and the films provided by the Washington office, the project of photographing flowers was continued.

Approximately 40 flower pictures were taken. This was done largely on personal time.

520 - NEWSWORTHY VISITORS

Regional Attorney Raymond Sroaf, Directory Drury and party, Johnson Neff, of the Fish and Wildlife Service (white-wing dove project), and Archeologist Julian Hayden of the city of Phoenix, were Headquarters visitors.

STATUS OF ARCHEOLOGICAL PROJECTS

Archeologist Steen completed supervision of backfilling of Compound F at Casa Grande and started stabilization work on White House Ruin at Canyon de Chelly. Archeologist King inspected the excavation project at Wupatki and the work of the Mobile Unit and of the emergency stabilization crew at Chaco Canyon.

COMPLETED PROJECTS

The long continued project of filing Headquarters photographs was completed with 6,400 negatives, two duplicate prints, and a complete print file finished.

PROJECTS FOR ENSUING MONTH

Bird study skins will be placed in celluloid tubes with stoppers, a number of such containers having been received from the Western Museum Laboratories. Preparation of print file cards to establish photographic files at each of the national monuments will be started. Ruins stabilization at Canyon de Chelly will be continued. Work will continue on the "Commercial uses of gypsum" exhibit for White Sands National Monument. It is hoped that the 16-millimeter motion picture reel "The Desert" may be revised so that it may be sent to Bandelier National Monument for the summer season as requested by Custodian Thomas.

SWTM

MONTHLY STATISTIC/L REPORT OF INTERPRETATIONAL CONTACTS

STATION	Personnel		Guided Trips		Lectures		Attended Stations		Unattended Stations		Visitor Participn HOURS	Total Contacts	Total Visitors
	Per.	Tem.	No.	Att.	No.	Att.	No.	Att.	No.	Att.			
Arches	1	0	28	204			2	195			263.5	399	553
Capulin Mountain	1	0	3	84	1	100			5	500	209	684	1,800
Chiricahua	1	0	1	3			1	216			76	219	1,020
Natural Bridges	0	0											75
Organ Pipe Cactus	1	0			7	32					21.3	32	900
Rainbow Bridge	0	0											26
Saguaro	1	0					1	233	1	7	108	240	1,235
Sunset Crater	0	0							1	386	96.5	386	772
White Sands	3	0			1	170	3	2,775	1	1,325	485.6	4,270	5,664
TOTAL BIO.-GEO.	8	0	32	291	9	302	7	3,419	8	2,218	1,259.99	6,230	12,045
Aztec Ruins	2	1	110	896	127	696						1,865	1,005
Bandelier	2	1	62	390	32	305	1	17	1	286		998	651
Canyon de Chelly	1	0	34	109			1	100				209	106
Casa Grande	2	0	161	849	121	565			2	474		1,414	1,160
Chaco Canyon	1	3	19	149	13	76						225	118
El Morro	1	0	17	43	3	9						52	48
Gila Cliff Dwell.	0	0											10
Gran Quivira	1	0	34	222	4	11						168	227
Hovenweep	0	0											110
Montezuma Castlo	2	0	145	552	12	32			1	150		584	730
Navejo	1	0	15	32								32	41
Pipe Spring	1	0	26	235	25	185	1	14				249	235
Tonto	1	0	103	768	62	244						1,012	1,701
Tumacacori	2	0	166	721	167	724						1,445	724
Tuzigoot	1	1	141	531	176	687						1,218	717
Walnut Canyon	1	4	36	117			1	389	2	657		1,163	796
Wupetki	1	1	59	156					1	222		378	315
Yucca House	0	0											18
TOTAL ARCH-HIST	20	11	1128	5,770	744	3,807	4	520	7	1,789		11,012	8,762
TOTAL ALL AREAS	28	11	1160	6,061	753	4,109	11	3,939	15	4,007		17,242	20,807
1st MONTH	29	4	1411	7,415	116	5,710	6	1,357	5	1,405		14,603	27,002
2nd YEAR	26	6	1454	7,516	1243	6,832						15,463	14,796

SCIENTIFIC AREAS

ARCHEOLOGICAL AND HISTORICAL AREAS

TOTAL

BRANCH OF MAINTENANCE

By Eugene Stonehocker, Mechanic
Coolidge, Arizona.

A trailer hitch was made and installed on USDI 2950 for Relief Ranger Alberts.

Front fenders were straightened and painted and headlamps repaired on USDI 1457. Transmission was overhauled on USDI 126C for Foreman Mullenaux on the Soil and Moisture job. Sewage disposal pump was pulled out, some repairs made, and it was put in operation again. The road drag from Saguaro National Monument was cut down and rebuilt, and trailer hitch removed from USDI 2950 and installed on USDI 1232. A turntable motor was completed and sent to White Sands for operation of a museum display.

A trip was made to Canyon de Chelly to bring back a stake truck for use at Montezuma Castle, and USDI 1237 was brought back to Headquarters, checked over, and taken to Chiricahua National Monument for use during fire season.

While at Canyon de Chelly, I repaired the magneto on the pump engine and gave Custodian Wyatt's pickup a tuneup.

Gates were hung on the trail from museum to ruins at Casa Grande, but the lock has not been completed yet.

USDI 1243 from Tonto was torn down for repair.

SWNM

BRANCH OF ACCOUNTING

By Parke W. Soule, Chief Clerk
Coolidge, Arizona

Vouchers prepared during the month, regular appropriations.	255
Vouchers prepared during the month, CCC	99
Purchase Orders issued, regular appropriation, Hdqrs.	36
Allotment Ledger Sheets prepared, regular appropriations.	305
Allotment Ledger Sheets prepared, CCC	107

Expenditures:

	<u>This Mo.</u>	<u>To Date</u>
1411000 National Park Service, 1941.	8,991.78	110,159.50
140/11000, National Park Service, 1940-41.	9.98	1,701.03
14x1010, Roads and Trails, NPS.	263.35	6,915.74
1410130, Soil & Moisture Conservation, 1941.	2,233.92	4,971.18
Civilian Conservation Camps.	8,359.07	95,638.14
Total.	19,848.10	219,385.59

PERSONNEL NOTES

The director's party passed up Jimmie Brewer's beloved Betatakin on May 21. It was raining when they passed the junction en route from Harry Goulding's trading post to Grand Canyon, and the director thought it would be unwise to risk sticking so large a party on the back roads. As luck would have it, the skies cleared in an hour or so, but you never know.

Hank Schmidt acted as master of ceremonies at a dinner given in the Arches CCC Camp on May 17 in honor of the Associated Civic Clubs of Southern Utah. Hank did a good job and there was every evidence that the 150 persons present enjoyed the evening.

The director's party found Mr. Buchenburg instead of Corky Jones in the Jones apartment in the ruins in Wupatki. Davy and Corky are soon to bid farewell to this unusual residence and will, we think, re-acustom themselves readily to the conveniences of a modern house. But we'll bet that more than once Corky will carry the dish pan to the door instead of to the sink, until she gets back into the groove.

Paul Beaubien was called to Colorado by the serious illness of his mother in May. He returned to the monument late in May, and will return to Colorado shortly after June 1. Ed Alberts will relieve him for the month of June.

The superintendent is complaining that he still hasn't met that new man Baczuk at Montezuma. At this rate he is afraid Baczuk will be a silver-haired old-timer before he gets acquainted with him.

James Eden at Bandelier, and Bob Upton at White Sands, completed their probationary service as park rangers in May, and are now solidly a part of the monuments organization. Congratulations! Not that any of us ever doubted that you would make it.

Jack and Virginia Cotter were vacationing in May. It was really a sort of honeymoon, for there was no time for a honeymoon when they were married. Ed Alberts held down the fort for Jack. Really, the fort--Tuzigoot is described as an "outstanding example of a prehistoric fortified hilltop." Of course Ed held down the museum too.

Again the superintendent called at Saguaro and found only the HCWP on duty. No scandal either way--Don was absent on proper official business, and the superintendent was adequately chaperoned.

Regional Attorney Sroaf and Mrs. Sroaf were pleasant visitors at Headquarters during the month.

And Shah-dee Wyatt has the measles. But he takes all that sort of thing in a manly stride. The phonetic spelling of young Charles Wyatt's nickname sounds sort of Navajo, wherein wouldn't be inappropriate considering his associations at Canyon de Chelly.

That every dark cloud has its silver lining was again illustrated this month at the Interpreters' Office. Padre Steeno, supervising the backfilling of exposed ruins at Casa Grande, was so choked up with dust that he found it impossible to smoke his pipe from May 7 until he left for Canyon de Chelly on May 21. In addition to the considerable saving in matches, relief from the pipe fumes was gratefully accepted by others.

It didn't take backfilling a ruin to stir up enough dust to aggravate both Christine Miller's and Dale King's chronic sinus irritation. Dale was forced to take sick leave for several days, while Cris. went to the coast. Hugh was both pleased and interested to learn by a letter from Cris. (she went by plane) that as soon as she got up to 10,000 feet, her sinuses cleared up completely. Hugh wonders if airplane treatments may not be both less expensive and much more pleasant than operations.

While on the subject of noses, Gene Stonchocker's must not be omitted. While working on the sewage disposal pump, Gene's pry bar slipped and peeled the bridge of his nose. This, together with a finger infection, put Gene on the sick-leave list for several days. It is reported that the sight of Gene's peeled nose nearly laid Al. Bicknell out, too.

Parko and Hugh are said to have had a wonderful time May 13 at an inter-city Rotary meeting held in Superior by the clubs of half-a-dozen neighboring communities. Hugh is now fully recovered from the foot injury which cramped his outstanding abilities at self expression through rendering of the Varsovienna.

Chuck Richey's habit of coming to work by the Casa Grande flag caused him some inconvenience recently. One morning Ranger Chrisman came out early to clean up some paper work before opening time thus getting Chuck down to the office before 7:30. A couple of days later Al. Bicknell painted the flag pole and Chuck might not have reached the office at all if he hadn't looked at his clock about 8:30.

Many of the field personnel will be interested to learn that Doc. and Mrs. Gipe have established a business in Coolidge by taking over the "Iceberg", a small wayside restaurant and soft-drink stand. Mrs. Gipe will thus make available to the community her famous pies while Doc's skillfully made cactus canes, jewelry boxes, and other unusual products will be on display. Everyone who knows the Gipes wish them great success in their new venture.

Ed. Alberts, when sending in his personnel photo, remarked that cameras didn't fib, but he thought the one that was used on him told a bit of a white lie. While we are on this subject, we suggest that you turn to page 269 of this report and read Ed's report of a storm that put Tuzigoot "in darkness for 24 hours". That must have been some storm, Ed. We suppose you guided visitors with a flashlight. How far did the curtain of darkness extend, or was it limited only to the buildings?

Teddy Bachr, who is just about to leave on his annual trip to Missouri and points east, acted as paper boy during Dale King's absence at Montezuma Castle. Teddy didn't deliver the paper, he collected it. He remarked sagely that the wind is an excellent agency for putting newspaper in circulation, and that it can distribute the Sunday edition just as rapidly as the smaller daily issue.

The following item came in (with the monthly report) from NP-12-A: "An assistant rushed into William S. Knudsen's office one day, much upset because a certain report was missing. How could they act? 'There are two kinds of reports', Knudsen remarked calmly, 'One says you can't do it. The other says it has been done. The first kind is no good, and the second kind you don't need'".

A recent letter from Roland Richert, formerly Roving Ranger at Hovenweep and Yucca House, informs us that Roland is getting along well and is enjoying his "stretch" in the army. Roland's address is; Weapons
SOUTHWESTERN NATIONAL MONUMENTS

PERSONNEL NOTES (Continued)

Troop, Second Cavalry Brigade, Fort Bliss, Texas.

And just as we write the above, Jack Andrich, who is taking Roland's place is the Four Corners Country this summer, comes into the office to say good bye as he heads north and east to "take over". Jack has been around Headquarters a couple of days for his break in, and already seems like an old-timer in the SWNM family. Good luck, Jack!

Last Memorial Day will be long remembered by Howard Reiber who was driving to Florence on the afternoon of May 30 and missed one of the curves. Howard's car turned over, but Howard escaped with a few bruises and the car received only some dents and a cracked windshield.

The following is an excerpt from the Resolutions passed by the assembled Southwestern National Monuments custodians, in meeting assembled, February 21, 1941:

"BE IT RESOLVED THAT OUR APPRECIATION BE EXPRESSED TO THE
WIVES OF SOUTHWESTERN NATIONAL MONUMENTS PERSONNEL FOR
THEIR ACTIVITIES DURING THE PAST YEAR CONTRIBUTING TO THE
BETTERMENT OF OUR ORGANIZATION, IN THE FOLLOWING FIELDS:

BIRD BANDING	PASSING OUT BOOKS
THE ROUNDTABLE	MORAL SUPPORT
EXCHANGE OF INFORMATION"	

*****SWNM*****

The
SUPPLEMENT
to the
Southwestern National Monuments
Monthly Report

THE CONFLICT BETWEEN PROTECTION AND PUBLIC USE OF FEDERAL PARK AREAS

By Chester A. Thomas, Custodian
Bandelier National Monument

(Presented at the Second Annual Custodians' Conference
Coolidge, Arizona, February 19-21, 1941)

The three broad principals upon which the policy of the National Park Service is based are as follows: (1) That the national parks must be maintained in absolutely unimpaired form for the use of future generations as well as those of our own time; (2) that they are set apart for the use, observations, health, and pleasure of the people; and (3) that the national interest must dictate all decisions affecting public or private enterprise in the parks.

Those are the duties we are charged with in the act creating the national parks and monuments. Needless to say, there is a seeming conflict set up in the very act. We are ordered to protect and at the same time make them available for the enjoyment of the public. As soon as the public has access to an area, there is immediate demand for roads and trails, shelter, comfort stations, campgrounds, hotels, stores, etc. To supply these demands of the traveling public it is impossible to avoid interference with some of the features of nature. The greater the use, the greater the disturbance of nature!

There seem to be two schools of thought in regard to the administration of the parks to comply with the policy of preservation and use. On one hand stand the purists who rabidly oppose any interference whatsoever with the regular scheme of nature. Opposed to the purists are the advocates of intense use, who would despoil any area, open up the whole system to roads, trails and honky tonks just so they could exploit the names of the national parks and monuments.

Before we get too far into the subject it might be well to consider a few definitions. Some of the seeming confusion, as is the case in most discussions, hinges partly on a misunderstanding of terms. The Administrative Manual (Chapter I, Section 4, Page 1) defines a national park thus: "A national park is an area of national significance distinguished by superlative natural scenery which has been set aside for the preservation, together with its characteristic native wilderness conditions, in as nearly unimpaired condition as possible, and dedicated to the use and inspiration of the people.

National Monument: A national monument is an area set aside to preserve historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest situated on lands owned or controlled by the United States."

As we are concerned primarily with national monuments, it is proper that we consider them mostly. I believe there is some misunderstanding that arises from the confusion existing in the public mind as to the

distinction between a park and a monument. Many of the habits of thought associated with large parks cannot always be applied to monuments of small or comparatively small area, and of different function.

The purists insist on the ideal area where nothing is touched and absolutely primitive conditions prevail. Some go so far as to say that, in a truly primitive area, we should not put out fires that are of natural origin; we should not try to control insect pests or disease of plants and animals. No roads or even trails would be built to these areas and they would be seldom visited by man. In fact, man, except upon rare occasions, would be prohibited from entering them.

It is true that lightning fires burned over the area long before man ever set foot on this continent. Nature herself has soothing remedies for fire scars and an orderly system of reclaiming burned areas. In a purely natural area, it would not be amiss to let a fire burn uncontrolled until it was extinguished by natural means. When the fire was out, natural erosion would probably change the original surface, perhaps start some new canyons, fill up some valleys with silt, and completely rearrange the landscape. Then she would proceed to start some of the plant growth that does well on the ashy and charcoal-filled rough soil, gradually establish some shrubs, then the deciduous trees, and finally end up with the evergreen forests in preparation for another fire a thousand or so years hence. Perhaps it would be worth while in teaching the lesson of how our forests were formed or how nature takes care of herself to treat our parks, or some of them, in such a manner.

If we go to a large natural area at the present time we can see just such processes taking place. In one part of Rocky Mountain National Park are some pretty fresh fire scars. Only the little raspberry has firmly established itself in the denuded soil, but at certain seasons of the year there are vast fields of flowers and low plants that have been allotted their place in the scheme of things, because a fire cleared out the trees that had denied them existence before. In a fresh scar in Mesa Verde National Park acres of pentstemons and gilia bloom in the summer. In another portion of Rocky Mountain are great areas of sage brush, higher shrubs, and scrub oak which tell of a fire perhaps a hundred years ago. On another slope is dense grove of aspen which has followed the lower growth and suggest a holocaust of several hundred years ago. Vast areas of lodgepole pine indicate where fires burned maybe a thousand years ago, while dense stands of spruce and fir show that conditions have not been disturbed by fire for countless ages. We apparently reason that the last is the ideal condition or the ultimate goal and would make it permanent so that other chapters in ecology might never be written.

An old Taos Indian once gave me this observation which I had never considered. He said "Before the white man came to the mountains, bugs and disease attacked the trees, a few trees died, and the gods seeing the dead trees sent the lightning to set them afire. The fire burned up the dead trees and the bugs and no more trees were harmed for a long time."

It is our policy to protect the parks and monuments from fires, however, and also to control insects and disease that would tend to harm trees. At Bandelier, we annually try to curb and hold in check the inroads of Dendroctonus and Ips species by cutting, peeling, and burning trees.

infected with these insects.

As a personal matter, I would be inclined to agree with the purists, although I fully realize that it is not in accord with approved park policy. It seems to me that any man-made interruption of the regular processes of nature means modification; the more you leave an area untouched, unentered, and uncontrolled, the better will be the chances for fauna and flora to go through the years unmodified and unspoiled. I should like personally, sometime, to see an area left entirely alone to learn just what the outcome would be. I certainly believe that we could give nature the benefit of the doubt in many cases and not insist on too elaborate a system of trails and roads justified on the premise of protecting our wilderness areas from nature herself.

The purists also have a good deal to say in regard to the way we should treat our prehistoric and historic areas. Some insist that our ruins be absolutely untouched and untouchable. They would not have us carry on any stabilization whatever and if a wall is about to fall from natural causes, let it fall rather than run the risk of modifying it to the extent of bracing it up and stabilizing it to save it from destruction. They point out that natural forces have been at work constantly on the building since it was constructed and that any effort to preserve it is only temporary and that nature and time will win out in the end. Nature has taken care that a representative number of walls have been preserved under mounds of her own making so that we have some of them in almost their original conditions. Too, we have found, over the earth, places where nature has not entirely allowed her creations to perish. In the rocks of Grand Canyon are preserved delicate forms of life that existed millions of years ago. Trees that grew eons ago are almost perfectly preserved in the Petrified Forest; even insects as delicate as gnats and mosquitoes have been embedded in pitch for millions of years. From this it is reasoned that Nature herself will see that some of the remains of man will survive long periods of time without any aid from man himself.

However, we are pretty much impressed with our own importance and like to think that we are defeating the aims of the elements by our efforts. Probably we actually do postpone the time of reckoning temporarily, but I'll wager old Mother Nature is just laughing up her sleeve because she knows all the time she'll do things in her own way in the end; witness Threatening Rock!

Let's look at the thing from the other side for a while, suppose we say from the standpoint of the super-user or whatever term we may apply to him. I may be a little cynical, but some of the hue and cry of the purists does not ring exactly true. I can't help but suspect that in a great many cases their motives are slightly tinged with selfishness, as is the case with too many of our high ideals. I sometimes read the following between the lines of their fervent arguments. "Leave the place untouched except by us who because of fortunate circumstance have plenty of leisure time to hire guides and horses and can go into the place and stay. Don't let the fellow whom fortune favors with only a short vacation have access to the wilderness. He won't appreciate it as we do! We are well-informed and enlightened nature lovers and should be allowed to tread the holy of holies without taking our shoes off."

I don't mean to imply that all our purists are insincere, but from little experiences, I've found that a great many who object to opening up the monuments and parks to the general public really have the feeling that those areas belong to them by right of discovery and resent the claim the rest of America has in sharing in the privileges the parks have to offer. Yet, they would be the first to clamor if we suggested that the area should be made only a state park instead of a national monument.

Primeval means first condition; untouched. If we come right down to it, it is probably impossible to keep any area in the United States in an absolutely primeval condition. There are too many factors over which even the parks have no control. The boundaries themselves are modifications; we can't control what goes on outside the area, but it certainly modifies the area inside. Animals, being more mobile, are more apt to suffer from wandering outside the boundaries where they are shot. This is particularly true of animals that migrate seasonally. We should like to protect the wild turkey at Bandelier. We do protect it in the winter time when it comes to stay a few short months with us, but at the time when it is raising its young and needs protection most, it is off the monument in the higher country infested with wood haulers, sheepherders, and other isolated people who have very little sympathy with our efforts to perpetuate the noble bird for the enjoyment of future generations.

The very use to which we put the monument has a detrimental effect not only upon plant life but on animal life. In the winter, it is not uncommon to see deer; wild turkeys winter in the canyon at Bandelier. The great crowds of people who visit the monument in summer tend to frighten the animals out of the canyon and they range into country where they are killed in the open season and the predators are killed at all seasons. Thus in another instance the idea of use defeats our purpose of preserving the wild life. Probably we can never have game in the area comparable with the amount that ranged here in former years.

Some one has said that an ideal is something toward which to work rather than something that should keep us from working. The most sensible attitude we can take, then, is to freely admit that we probably will never attain the standards desired by the purists, nor can we let the opposite sect deter us from heading for our ideal. It is probably impossible to keep any area in the United States in an absolutely primeval condition, but there are reasonable aspects to it and reasonable objectives that we can strive for. If we do not strive to preserve the parks and monuments in their original condition we haven't anything that is different from any other area you can think of. If there is to be absolutely no use of these areas, why have them?

Sometimes I am inclined to believe that the more people to whom we can show our wildernesses, our ruins and historic sites, the more likely we are to keep them. The more they see them and get our interpretation of them, the more they come to appreciate them, to get the idea of protection, and to cooperate in keeping them sacred. It is usually the fellow on his first trip to the mountains and our parks who pulls great bunches of flowers, throws his cigarette where it will burn the trees and the wildlife. As he sees more of the wilderness, he begins to appreciate it and will take increasingly greater care to see that it is preserved. Few of

us would ever appreciate art if we never had the opportunity of seeing it, or classical music if we were denied the privilege of ever hearing it. The basis of use of an area should depend upon use for human need and enrichment of life for all, be they rich or poor, gifted with unusual appreciation or only the capacity for it!

The middle-of-the-road course, then, would seem to be to approach the problem with the understanding of our ideals, but with the recognition that we can never reach them to the satisfaction of the purist. On the other hand we should unalterably oppose exploitation for selfish interest, attempt through the interpretation of the park to instill a respect and appreciation in the public that will enlist their efforts in our behalf to reach our ideal; burn heretics and dissenters at the stake of public opinion.

*****SWNM*****

ENRICHING OUR INTERPRETATION THROUGH WRITING, RADIO, OUTSIDE TALKS, AND OTHER MEANS

By Louis R. Caywood, Custodian,
Tumacacori National Monument

(Presented at Second Annual Custodians' Conference,
Coolidge, Arizona, February 19-21, 1941)

Before beginning the discussion of this assignment let us be certain of the meaning of the title. Enrichment, according to the dictionary, means adding something of value. Interpretation is the act of explaining the meaning or significance of something. We may take the title to mean the value we add to our Park Service methods of explanation through writing, radio, and outside talks.

The program of such activities would apply primarily to monuments which are fairly well developed with sufficient personnel to properly handle extension work. However, monuments which have very slack visitor seasons could also use some of these methods to good advantage to increase their travel during their regular season. An increase brought about in this way would mean the use of exceptional methods of interpretation to make people plan their vacation itineraries far in advance.

Through the preparation of articles for magazines, newspapers, and syndicates either by National Park Service personnel or by persons outside the National Park Service, what is added to our store of knowledge and our methods of presentation? The same line of questioning may likewise apply to the value of radio talks by personnel and outsiders on National Park Service areas. If facilities are available at some of our better developed monuments, outside speakers and personnel not connected with that monument, may be encouraged to give appropriate talks to groups of local people or to groups of visitors where there are large enough

groups to warrant such effort. Thus, in each case something of value is added to our knowledge and methods of explanation. Without going deeper into the problems to be encountered, I am sure you will all agree that such practices are fine and should be encouraged.

What is the policy of the National Park Service toward such activities?

The policy of the National Park Service on writing by its personnel is presented clearly and concisely in Office Order No. 353, dated February 13, 1939, and is here given as it applies to those not on the writing staff of the Service:

"The preparation of articles on National Park subjects by National Park Service personnel on personal time is encouraged, in aid of securing a wider public understanding of the ideals and purposes of the Service and of the attractions of the various Federal park areas."

"For the information of those interested in such writing, the following procedure is outlined:

"For those not on writing staff of the Service:

1. Scientists and other technicians preparing articles on scientific or technical subjects concerning the national parks and using their own names, without official titles, need not get official approval of their articles.

2. Scientists and other technicians writing such articles, but using their official title or otherwise indicating connection with the National Park Service, must obtain the approval of the Washington Office prior to publication. Such articles are reviewed by the Office of Editor-in-Chief, that office securing necessary technical approval.

3. While information gathered in the course of his work may be used by the author in preparing such articles, care must be taken that no official time is used in writing the article or in securing information especially for use in its preparation.

4. Administration officers and others of non-technical and non-publicity status also are authorized to prepare stories on the above basis provided such stories do not forecast Departmental policies or procedure.

"As for writing by those outside the Service, there is no control which can be used except to encourage such writers as may be contacted and present them with any special literature prepared by the National Park Service and all references available for research into the subject. The value of outside writing lies in the possibility that new material may be presented and in the manner of presentation. Thus personnel may benefit by additions to their knowledge and by reviewing other methods of presenting information."

In addition to information furnished by request or by contact with writers, special Park Service literature should be distributed to the following sources:

- | | |
|--------------------------------|----------------------------|
| 1. Chambers of Commerce | 6. Newspapers |
| 2. Guest ranches | 7. "Slick" paper magazines |
| 3. Information desks at hotels | 8. Schools |
| 4. Museums in adjacent cities | 9. Libraries |
| 5. Civic organizations | 10. Scientific societies |

ENRICHMENT OF OUR INTERPRETATION THROUGH WRITING, RADIO, OUTSIDE TALKS,
AND OTHER MEANS. (Continued)

By this distribution of literature a great many more people will be cognizant of the facts pertaining to your monument. Aside from the increased travel which will result, there will be better informed groups for contact purposes. Those who come with some knowledge of your area will be prepared to ask questions and will leave much better informed than had they never heard of it before.

Radio in the past few years has rapidly become one of the most, if not the most important method of disseminating information. Radio script writers always appreciate help in preparing script for broadcasts. This type of writer usually contacts the place on which he will broadcast and it would be most wise to give him complete information so that no errors will appear in his script. Radio reaches a much greater number of potential visitors than does writing. In the past the National Park Service has prepared series of radio broadcasts on a great many of its areas. The scripts were made available for general use after the initial presentation over an eastern station. Special broadcasts have been successfully presented from many of the Park Service areas. Personnel have prepared and have presented short series of radio talks from many of the nation's radio stations. At times when personnel are called upon to give short radio broadcasts over local stations the technique of dramatization and presentation should be carefully studied in order that the program be forcefully delivered.

Persuant to outside talks, personnel should be available at all times to give talks before student, civic, and local groups. Many interesting and informative talks may be prepared with visual aids such as slides, movies, and objects of scientific interest. This adds value to the area and promotes a feeling for becoming better acquainted with the facts concerning that particular locality.

Finally comes the matter of having outside personnel and outside visitors give talks at monuments where facilities are available. Such talks are best given at areas where visitors come to camp for one or more nights and liesurely take part in campfire programs. Visiting personnel may add color and variety to the programs. Visitors frequently are contacted who may be encouraged to talk on subjects that pertain to the monument and on which they have specific knowledge. At a geological monument for example, a visiting geologist might be approached to speak on some geological subject, etc. Much good feeling is then developed between visitors and the Service.

At other monuments where overnight facilities are not offered, but where a town is nearby, local speakers should be occasionally encouraged to give talks in the evening where appropriate monument facilities are available. When properly advertised in advance, a good local turnout may be expected. If such a program is successful, it might be well to try arrangements for bringing in speakers from nearby museums, colleges, or universities. By these methods a feeling of community spirit is developed through which your monument is continually in the minds of the local people.

The interpretive program at all of our Southwestern National Monuments should encourage activities which increase the significance of the area. Writing should be encouraged as an aid to securing a wider public understanding of the ideals and purposes of the Service and of the attractions

of the various Federal areas. The use of radio facilities is extremely important because of the number of potential visitors reached that could not be contacted in any other manner. Finally, every attempt should be made to develop the highest good feeling between your area and local people in all walks of life.

*****SWNM*****

UNIFORM COUNTING OF VISITORS

By Matt N. Dodge, assistant naturalist,
Southwestern National Monuments.

(Presented at Second Annual Custodians' Conference
Coolidge, Arizona, February 19-21, 1941)

On the face of it, the matter of counting the visitors to any national monument would appear as one of the simplest duties assigned to a custodian. However, as all of you men know, this is not the case because it is complicated by a number of factors which are not at first obvious. Among these are the various types of information desired in connection with the visitor count. You may need for your records one type of information, the Washington office desires records on the number of cars, and various states represented by the visitors, and Headquarters must have the actual visitor attendance figures in order to send in to Washington on September 30 each year an annual total of the visitors to each of the units in the Southwestern National Monuments.

One of the basic difficulties faced by you field men is to know what persons to count and what ones not to count, for if we are to make an accurate count of monument visitors, we must first have an accurate definition of a visitor. I shall not presume to make such a definition, but shall try to bring out why such a definition is very badly needed, not only for establishing a uniform basis for visitor count within the Southwestern Monuments, but as the foundation of a standard count record throughout the entire Service.

Presumably the basis of visitor count used at units of the Service outside of the Southwestern National Monuments is none of our business; practically it is of considerable importance to us. At Washington our annual travel record is compared with the yearly travel counts from all of the other units of the Service. We are somewhat prone to feel that these travel records have some influence in the allotment of funds to the various units as it seems reasonable to assume that, whether it is actually true or not, the ratio of people who visit the areas is something of a criterion of the ratio of men, equipment, and money needed to provide protection to the area and service to these people. If at one Park every person entering the reserve is counted as a visitor, while at another approximately

one third are not counted because they came to the Park on business with the operator or for some purpose other than to see and enjoy the features for which the reserve was created, then the records at Washington will show that the first area has one third more travel than the second where-as, actually, the number of persons coming to both was exactly the same. THUS THE SUPERINTENDENT WHO CONSCIENTIOUSLY SETS UP A CONSERVATIVE BASIS OF COUNTING VISITORS PENALIZES HIS UNIT in comparison with the Superintendent who counts every person who enters his park or monument.

In an effort to clarify this problem of what constitutes a visitor, it may be helpful to make a breakdown so that we may classify persons according to the primary incentive they have for entering a national park or monument. It is readily understood that not all of these reasons will apply to every area:

I - To enjoy features for which area is set aside.

- a. Do not make use of interpretive services.
- b. Do make use of interpretive services.
 1. Conducted field trips.
 2. Conducted Museum tours.
 3. Talk programs.
 4. Attended exhibits.
 5. Non-conducted field trips.
 6. Non-conducted museum tours.
 7. Unattended exhibits.

II - To Use Physical Facilities of area.

1. Use picnic area or camp ground.
2. Obtain road information, see if friend registered, etc.
3. Rest in lobby.
4. Use Comfort Station or get drink of water.
5. Use parking area to change tire, etc.
6. Use telephone.
7. Steal-a-look at feature--"runaround". Use Road.
8. Pass through area on a Through Highway.

III - To Conduct Business

1. Official Business with Supt. or staff member.
2. Official business with operator or concessionnaire.
3. Personal business with resident of area or his family.
4. Attend meeting or convention held in area.

IV - To Conduct Social Affairs.

1. Visitor or house guest of resident of the area.
2. Attend party given by resident of area.

This problem is further complicated by the fee system which is in effect at some areas and not at others. Again the location of the checking station at which the fee is collected and/or the visitor count made, greatly influences the totals. For example, in Zion National Park, Utah, a main highway passes through a portion of the Park and checking stations

UNIFORM COUNTING OF VISITORS (Continued)

are located at the two points where this highway enters and leaves the area. Not only are all persons who enter the physical boundaries of the Park thus counted, but a fee is collected from the driver of each automobile. This applies (or did apply when I was there several years ago) ~~WHETHER THE PERSON TAKES THE SIDE ROAD INTO ZION CANYON WHERE THE FEATURES OF THE PARK ARE LOCATED OR NOT.~~ In contrast with this, over in New Mexico, Highway U.S. 70 passes through a corner of White Sands National Monument. From this highway, persons get a view of some of the dunes, and by leaving the car, crawling through a fence, and walking a hundred yards to the top of a dune, they can get a fine view of the extent of the sands. However, the checking and collecting station is located at the monument headquarters which controls a side road entering the dune area, and FEES ARE COLLECTED AND A COUNT MADE ONLY OF SUCH PERSONS AS GO OUT INTO THE HEART OF THE SANDS. If, as at Zion, all persons were counted who used the main road through the monument regardless of whether they took the side road to the portion of the area where the scenic and scientific features are located, the visitor count at White Sands would immediately double or, perhaps, triple.

The preceding example is only one of a number which might be used to show the lack of uniformity in counting visitors which is present within the Service. A general remedy, if one is needed, can be applied only through the regional or Washington offices. However, similar inconsistencies and nonuniformities in visitor count exist within the Southwestern Monuments, and it is within our realm to do something about them. Only two steps are necessary; first, to set up a definition of a visitor upon which we will all agree; and second, to determine whether we are going to count only bona fide visitors or whether we will follow the system used by some of the other Service areas and count every person who enters the area even if he is an insurance salesman who comes in only for an evening business call, and will see nothing of the monument except the road and the inside of the house of his prospect. The great variety of conditions found among the Southwestern National Monuments plays an important part in making difficult the establishment of a system for uniform counting of visitors.

Further, the statistical record of interpretive contacts which must be made is a source of confusion to some of the field men who find it difficult to differentiate between an interpretive contact and an informational service. In the more heavily traveled areas where counting visitors is a duty of one department and making and recording interpretive contacts is the realm of another, keeping the two separate is not so hard, but in a number of the Southwestern National Monuments one man must do it all in addition to his other activities. And, of course, there is still the problem of attempting to make a visitor count in several monuments where there is no personnel at all.

For several years Headquarters has issued a form known as SWM 16 which records details of visitor contact counts and which the field man is required to fill out and submit each month. Although this form was devised and put into use long before I was affiliated with the Southwestern Monuments, I am fairly familiar with its history. As we all know, The Ross was always very much interested in monument visitors and was much concerned with giving them the very best service possible. He was one of the first in the Service to appraise the personal contact as the most important and SOUTHWESTERN NATIONAL MONUMENTS 306 SUPPLEMENT FOR MAY, 1941.

UNIFORM COUNTING OF VISITORS (Continued)

valuable method of giving the visitor an understanding of the area and an inspirational appreciation of its significance as a great natural resource. When the group of monuments under his supervision became so large that he could not himself meet and greet all the visitors, he wanted to keep in touch with this contact service by accumulating records which would present to him four different phases; (1), improvements in guide and museum services as indicated by increased length of average visitor contact time; (2), comparative visitor holding power of his various men; (3), effect of long hours, peak crowds, and similar pressure factors on the holding power of the men; and (4), effect of installation of interpretive devices (when visitors became too numerous for men to handle personally) on increasing visitor interest as measured in length of time of stay. Through comparing statistics submitted on SWM 16 each month by the field men, the Boss could keep his finger very closely on the pulse of the interpretive service, and was able to develop a policy affecting future development trends of the interpretive program. Form SWM 16 was designed to bring in the desired information, and when it was found to be failing in some respect, it was revised. Following each revision (of which there were five), a howl of protest arose from the field.

The system of visitor contact count and contact time study based upon SWM 16 was complicated in 1938 by the request from Washington for a monthly report on a form "Monthly Report of Educational Activities" which was later issued in a revised form "Monthly Statistical Report of Interpretive Contacts". Field men have complained that the time and effort required in keeping records for both of these reports interfere with their contact work and detract from the quality of their interpretive presentations.

During the past year, an effort has been made to reduce the quality of interpretive report data required from the field men to the minimum necessary to fulfill the following requirements; (1) statistical data on interpretive contacts required by the Washington office; and (2) data on the proportion of time spent by all field men in interpretive and administrative duties respectively, required by the Superintendent. It has been hoped that this data could be sent in on a single form, but since the form provided by the Washington office does not include the data required by the Superintendent, and since any form prepared by Headquarters and including both requirements would necessitate that data be copied off each month for the Washington form, no satisfactory solution has yet been devised.

The problem of making a count of interpretive contacts is not limited, however, to the two report forms just mentioned, nor to the Southwestern Monuments, for a count of interpretive contacts is required at each unit throughout the entire National Park Service. The real problem arises from the fact that different conditions exist at different areas, and that different interpretation of the count requirement has resulted in non-uniform system of reporting visitor contacts. The Boss, as most of us know, was considerably perturbed over the fact that in some parks a two minute visitor contact at a checking station was counted as an interpretational contact and carried the same weight in a report to Washington as an hour spent by one of our field men in guiding a visitor through a ruin and museum. This problem was discussed at some length at the Naturalists' Conference at Grand Canyon, with the result that a resolution was adopted which provided that

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UNIFORM COUNTING OF VISITORS (Continued)

the time of the interpretational contact enter the report picture going to Washington. Henceforth then, the report unit of interpretational contacts for all Scenic and Scientific Service areas will be the VISITOR PARTICIPATION HOUR. It will thus take 30 two-minute contacts to equal one 60 minute guided trip through a ruin with one person. This is an important forward step toward placing all interpretive reports to the Branch of Research and Information at Washington on the same basis, and should be instrumental in furnishing Washington with a much more accurate knowledge of the comparative interpretive personnel needs of the various areas than has been the case in the past.

In conclusion, may I enumerate briefly the various factors which complicate the matter of a visitor count. Lack of any standard definition of what constitutes a park or monument visitor is the basis of the non-uniform system of counting visitors which now exists throughout the Service. As a result, the travel picture which reaches the Washington office is not accurate, and comparisons made of the travel to various areas of the Service are not based on a uniform standard. We can correct this condition within the Southwestern Monuments by setting up our own standards, even though different conditions in different units may make this difficult.

Visitor contact counts should not be confused with the numerical count of visitors and such confusion as now exists may be overcome with the application of clear thinking to the problem. A standard time unit for a visitor contact was set up at the Naturalists' Conference at Grand Canyon and its use is now in effect in all of the Branch of Research and Interpretation units of the Service. It should be very helpful in establishing an accurate picture of the functioning of the interpretive programs in the various areas, and should provide a basis by means of which fairly accurate comparison may be made, although 75 Visitor Participation Hours is an entirely different matter to the custodian who conducts 75 one-person one hour trips through a ruin than to the ranger-naturalist who takes 75 people out on a one hour nature walk.

*****SWNM*****

FINIS

This is the last issue of the "Southwestern National Monuments Monthly Report." We speak of it in quotation marks because it has been more than an official report. From its beginning in 1932 when Boss Pinkley assembled the material and cut the stencils himself, it developed into a medium which served not only the purposes of official report to the Director of the National Park Service, but as a house organ and technical journal. Its informal style and unawed humanity attracted the attention of many persons who loved the Southwest, though they had no direct connection with the Southwestern National Monuments. The technical material attracted the interest of universities and prominent libraries, particularly in the field of archeology, and the demand for copies far exceeded our capacity to produce them. The mailing list, now discontinued, of some 300 names, consists almost entirely of Service-connected persons, laboratories, and distinguished schools.

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(SGD) Hugh M. Millor,

June 30, 1941

Superintendent.

SOUTHWESTERN MONUMENTS

MONTHLY REPORT



JUNE 1941

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

SOUTHWESTERN NATIONAL MONUMENTS

JUNE, 1941, REPORT
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SOUTHWESTERN NATIONAL MONUMENTS
NATIONAL PARK SERVICE

HEADQUARTERS

COOLIDGE, ARIZONA

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HUGH M. MILLER, SUPERINTENDENT

<u>FIELD STATION</u>	<u>POST OFFICE</u>	<u>CUSTODIANS</u>	<u>1940 VISITORS</u>	<u>ACRES IN AREA</u>
ARCHES	Moab, Utah	Henry G. Schmidt	2,518	33,680.00
AZTEC RUINS	Aztec, New Mex.	Thomas C. Miller	10,550	25.88
BANDELIER	Santa Fe, N. M.	Chester A. Thomas	13,689	26,026.20
CANYON DE CHELLY	Chin Lee, Ariz.	Charles D. Wyatt	2,753	83,840.00
CAPULIN MOUNTAIN	Capulin, N. M.	Homer J. Farr	35,100	680.42
CASA GRANDE	Coolidge, Ariz.	Albert T. Bicknell	12,877	472.50
CHACO CANYON	Chaco Canyon, N.M.	Lewis T. McKinney	2,245	21,509.40
CHIRICAHUA	Dos Cabezos, Ariz.	Frank L. Fish	10,120	10,694.80
EL MORRO	Ramah, New Mex.	Robert R. Budlong	1,593	240.00
GILA CLIFF DWEL.	New Mexico	No Custodian	80	160.00
GRAN QUIVIRA	Gran Quivira, N.M.	Joseph H. Toulouse	2,494	610.94
HOVENWEEP	Cortez, Colorado	John K. Andrich	352	285.80
MONTEZUMA CASTLE	Camp Verde, Ariz.	Earl Jackson	8,078	521.41
NATURAL BRIDGES	Blanding, Utah	No Custodian	901	2,740.00
NAVAJO	Tonalea, Arizona	James W. Brewer	513	360.00
ORGAN PIPE CACTUS	Ajo, Arizona	William Supernaugh	9,775	330,687.00
PIPE SPRING	Moccasin, Ariz.	Leonard Heaton, Act.	1,141	40.00
RAINBOW BRIDGE	Tonalea, Arizona	No Custodian	215	160.00
SAGUARO	Tucson, Arizona	Don W. Egermayer	16,892	63,284.00
SUNSET CRATER	Flagstaff, Ariz.	David Jones, in chg.	11,888	3,040.00
TONTO	Roosevelt, Ariz.	John Peavy	5,240	1,120.00
TUMACACORI	Nogales, Arizona	Louis Caywood	7,287	10.00
TUZIGOOT	Clarkdale, Ariz.	Jack Cotter	6,125	42.66
WALNUT CANYON	Flagstaff, Ariz.	Paul Beaubien	12,258	1,879.46
WHITE SANDS	Alamogordo, N.M.	Johnwill Faris	54,498	143,227.49
WUPATKI	Flagstaff, Ariz.	David J. Jones	3,326	35,813.03
YUCCA HOUSE	Cortez, Colorado	John K. Andrich	136	10.00
	TOTALS		232,624	761,160.97

AREA, END TRAVEL YEAR 1940: 1,189.314 Sq. Miles

FINIS

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(SGD) Hugh M. Millor,

June 30, 1941

Superintendent.

OPENING

By Hugh M. Miller, Superintendent

The Superintendent devoted most of the first half of June to the preparation of final estimates for Fiscal Year 1943. Field work during the latter half of the month included inspections at Walnut Canyon, Wupatki, and Bandelier National Monuments and a day in the Regional Office. Visits were made also to Montezuma Castle and Tonto National Monuments with Ronald Lee, Supervisor of Historic Sites, and Dr. Aubrey Neasham, Regional Historian. Mr. Lee had previously visited Walnut Canyon, Wupatki, and Tuzigoot National Monuments with Park Naturalist King. The opportunity to discuss problems of administration, interpretation, and stabilization with Mr. Lee was greatly appreciated.

Termination of the Bandelier CCC camp on June 28, despite sound doubts expressed last month, left all going jobs complete. High credit is due Project Superintendent Chase and all camp supervisory and facilitating personnel for their unflagging energy and interest in the project, and for their determination to bring it to a successful close. The Bandelier Camp has ranked high in accomplishment and has long been rated among the best technical service projects in CCC. That reputation was strengthened by the fine work performed in the past few weeks. The work at Bandelier will stand as an excellent example of the successful application of CCC to the problems of the physical development of a park area.

An attempt during the month to obtain an option to purchase the Heiser spring at Wupatki National Monument failed because buyer and seller failed to agree on the price.

Allotment advices have not been received either for regular or CCC projects. Pending receipt of information with respect to available funds, obligations are being made for immediate requirements only. CCC work programs are being withheld for information with respect to budgeting for Fiscal Year 1942. It is planned to concentrate on fewer jobs and to stress completion of all jobs undertaken.

As noted on the fly-sheet, the Southwestern National Monuments Monthly Report in its present form will be discontinued with the June issue. Hereafter a consolidated monthly report will be prepared at Headquarters. It will not be duplicated for general distribution. This action is taken in conformity with Service policy to reduce the number of semi-official publications. The Southwestern National Monuments Monthly Report was developed by the late Frank Pinkley and during the period of its publication contributed very greatly to the administration of the monuments. It served to bind scattered personnel together into a closely-knit group and attracted wide attention.

As outlined on page 311 of this report, travel for the month shows a notable increase with 28,225 persons visiting the various units of the Southwestern National Monuments as compared with 20,807 during May, 1941, and 21,032 during June one year ago. Total visitors for the travel year to date is also well ahead of the record last year as of the same date. The unusually long spell of cool weather which prevailed during the spring and early summer throughout the southern portions of the Southwest is given credit for encouraging winter visitors to remain much longer than usual and probably accounts, with other factors, for the increased attendance at the scenic, historic, and prehistoric attractions of this portion of the country.

CONDENSED REPORT

GIVING HIGHLIGHTS OF THE MONTH

Coolidge, Arizona,
July 1, 1941.

The Director,
National Park Service,
Washington, D. C.

Dear Mr. Director:

The Condensed Report for the month of June, 1941, follows:

000 GENERAL.

<u>OIO Travel</u>	June 1941	Travel Yr. to date	June 1940	1940 Travel yr. to date
Arches	472	2,387	213	1,850
Capulin	3,300*	11,750*	3,300*	13,800*
Chiricahua	1,922	7,647	1,119	5,710
Natural Bridges	125*	200*	117	329
Organ Pipe	450	8,830	800*	8,035*
Rainbow Bridge	50*	154*	50*	94*
Saguaro	743	13,050	751	15,145
Sunset Crater	2,114	5,114	1,404*	4,990*
White Sands	8,509	42,626	4,877	28,357
Total Biol.-Geol.	17,685	91,758	12,631	78,310
Aztec Ruins	1,486	4,917	1,014	4,532
Bandelier	1,406	3,951	1,591	5,091
Canyon de Chelly	288	823	423	1,473
Casa Grande	1,026	15,776	694	10,042
Chaco Canyon	228	612	217	1,136
El Morro	165	388	158	759
Gila Cliff Dwellings	10*	30*	10*	30
Gran Quivira	272	1,424	196	1,402
Hovenweep	13	166*	94	200
Montezuma Castle	1,110	5,321	957	4,790
Navajo	71	245	52	226
Pipe Springs	195	856	111	753
Tonto	652	7,810	203	4,448
Tumacacori	489	7,395	338	6,499
Tuzigoot	887	5,779	507	3,678
Walnut Canyon	1,669	5,088	1,458	5,584
Wupatki	578	2,068	372	1,746
Yucca House	5	50*	6	60*
Total Hist.-Arch.	10,540	62,689	8,401	52,449
GRAND TOTAL FOR JUNE	28,225	154,447	21,032	130,759
Last Month	20,807	126,222	14,796	109,538

*Estimated Travel

CONDENSED REPORT (Continued)

100 ADMINISTRATIVE

110 Superintendent's Special Activities

Office routine occupied Superintendent Miller's time during the first half of the month and field inspection and convoy duties kept him away from Headquarters the remainder of the time. For details, see page 310.

120 Monument Inspections

Park Service visitors include the following:

Arches - Ross Maxwell, J. Diehl, and G. Norgard.

Aztec Ruins - J. Andrich, T. Smiley, R. Lee, E. Reed.

Bandelier - J. Coffman, R. Lee, Saari, E. Reed, H. Miller, J. Cotter.

Canyon de Chelly - Ross Maxwell, E. Reed, and R. Lee.

Chaco Canyon - R. Lee, R.R. Maxwell, P. Balch, E. Reed, and R. Higgins.

Chiricahua - Director Drury, M.R. Tillotson, and C. Richey.

Headquarters - J. McGregor, L. Caywood, and C. Baczuk.

Montezuma Castle - C. Richey, J. Golden, and R. R. Maxwell.

Navajo - C. Richey, A. Kuehl, and H. A. Montgomery.

Pipe Spring - A. Kuehl, and George Norgard.

Tuzigoot - C. Richey, H. A. Montgomery, and E. Vogt.

Walnut Canyon - H. Miller, H.A. Montgomery, C. Cotter, and D. Jones.

White Sands - Director Drury, M. Tillotson, C. Richey, W.B. McDougall, and J. Veal.

Wupatki - H. Millor, C. Richey, A. Kuehl, and C. Krueger.

170 Complaints

Sunset Crater - Roads subject to much unfavorable visitor comment. (p.338).

White Sands - Closing hour too early for visitor requirements (p.321).

200 MAINTENANCE, NEW CONSTRUCTION, AND IMPROVEMENTS

210 Unusual Maintenance

Bandelier - Trail destroyed by winter floods was rebuilt (p.348).

Tuzigoot - Road and Trails improved (p.340).

220 New Construction

White Sands - Telephone line nearly completed (p.321).

230 Special Improvements

Bandelier - Boundary fencing and building construction projects completed (p.346).

Canyon de Chelly - Revetment built to protect monument and operator's structures (p.339).

Montezuma Castle - Campground construction completed, and fencing projects nearly finished (p.342).

ACTIVITIES OF OTHER AGENCIES

310 Utility Operators

Canyon de Chelly - Auto trip started in canyon. (p.339).

White Sands - Need becoming apparent for more space for operator (p.321).

320 Cooperating Government Agencies

Organ Pipe - B.P.I. Studies of Cactus disease started (p.330).

Saguaro - B.P.I. Studies of Cactus disease continued (p.329).

Wupatki - S.C.S. Representative working in area (p.337).

Donations and Accessions

Wupatki - Collection of Kodachrome slides received (p.337).

400 INTERPRETATION

410 Lecture and Guide Service

All Areas - Records summarized on page 352.

Aztec Ruins - Service provided for longer period during day to handle summer visitors (p.327).

Bandelier - Seasonal lecture and auto caravan programs started (p.346).

Chiricahua - Organized groups given Interpretive services (p.331).

Hovenweep - Seasonal Roving Ranger entered on duty (p.333).

White Sands - Army personnel from Fort Bliss visiting area in large numbers (p.320).

420 Museum Activities

Chaco Canyon - All items being catalogued (p.518).

Chiricahua - Preliminary exhibit plans approved (p.349).

Montezuma - Installations continued slowly (p.341).

Tonto - Museum cases received (p.326).

Wupatki - Model of Nalakihu Ruin on display in Flagstaff (p.337).

430 Research and Observations

431 Botany

Bandelier - Herbarium specimens collected (p.346).

Capulin Mountain - Luxuriant display of wild flowers appeared (p.345).

Canyon de Chelly - Plant collections made (p.339).

432 Zoology

Canyon de Chelly - Check list of birds started (p.339).

Casa Grande - Young bats found dead in ruins (p.517).

El Morro - Two mountain lions reported (p.335).

433 Geology

Arches - Survey made to provide basis for interpretive plans (p.324).

Canyon de Chelly - Eliphus bones found (p.339).

434 Archaeology

Arches - More signs of prehistoric man found (p.324).

Tonto - Bone materials identified (p.350).

Wupatki - Excavation work continued slowly (p.337).

435 Historical

Pipe Springs - Preliminary research started (p.350).

500 USE OF MONUMENT FACILITIES BY PUBLIC

510 Increase or Decrease of Travel

All Areas - Although storms and floods retarded travel in several northern areas, the month's records show a general increase in number of visitors (p.311).

520 Newsworthy Visitors

Wupatki - E. McKee, J.C. McGregor, L. F. Brady, Geologist Schenk.

600 PROTECTION

640 Forest and Building Fire Protection

Bandelier - One lightning-set fire extinguished. Building inspections made (p.347).

Pipe Springs - Grass and weeds removed because of fire hazard (p.316).

Montezuma Castle - Weeds removed to reduce fire hazard (p.342).

Saguaro - Presuppression activities for season are current (p.329).

650 Ruins Stabilization

Canyon de Chelly - Stabilization of White House Ruins completed (p.339).

CONDENSED REPORT (Continued)

650 Ruins Stabilization (Continued)

Chaco Canyon - Emergency repairs to Pueblo Bonito, due to fall of Threatening Rock, completed. Work on Wiji finished (p.320).

Pipe Springs - Repair. Project to old fort finished (p.315).

660 Insects and Tree Diseases

Bandelier - Defoliator identified (p.347).

Navajo - Technical advise requested on insect injuring pinyon pine(p.325).

680 Accidents

Saguaro - Motorcyclist painfully injured in fall (p.329).

900 MISCELLANEOUS

Arches - Another arch discovered (p.324).

FIELD REPORTS

FROM THE MEN ON THE JOB

PIPE SPRING

By Leonard Heaton, Acting Custodian
Moccasin, Arizona.

Visitors this month, 195; travel year to date, 856.

Report for the month of June is coming up and I have only today to get it in on time. I have been so busy with the CCC boys and other work the past month, I am not sure whether I will get into this report the things I should.

Travel: There have been more parties out to see the monument than a month ago but fewer visitors, the difference comes in that I did not have any large groups as in May.

Total contacts at the Fort were 153 from the following states: Arizona, California, Utah, Nevada, Texas, Wyoming, and Washington D. C. There were 42 people who used the camp area, either for picnics or overnight camping, which is a big increase over last month.

Among the visitors were Al Kuehl, from Region III Headquarters; George Norgard, also of Region III Headquarters, who stopped in for an hour or so on June 14. Professor Clarence Cottam, Botanist from the University of Utah, and Lieutenant W. Ray of the CCC camp were in.

Weather: The weather man has at last turned on the heat, with dry, hot west winds that are blowing the early grasses till they have become a fire hazard. My record shows that we have had for the month six days cloudy, 11 partly cloudy, 14 clear, and five days that gave us some storm, either thunder showers or night rains. The fore part of the month was rather cold coming close to frost on two different mornings. The last week has been on the other side; very hot during the day.

Stabilization of Fort: Stabilization work on the fort was carried on to completion, or rather till the funds were exhausted, though we did get through with the main part of our project as was first planned--that of reroofing, and pointing up the joints, that had weathered away and showed signs of crumbling. The staining of the new cement mortar, has not been as successful as I had hoped, because using the red and blue clay, it was hard to get each can of stain the same color. A year or so of storm and wind I believe will correct most of it. I still lack the flag pole for the watch tower and a way to get the flag up and down without getting onto the roof each time.

I hope to have my stabilization report to you early in July; writing,

SOUTHWESTERN NATIONAL MONUMENTS 315 MONTHLY REPORT FOR JUNE, 1941.

PIPE SPRING (Continued)

and reporting are my hardest tasks.

Health and Accidents: With the closing of school in May our children were exposed to the measles and about every two weeks one of them comes down with the German Measles; none of them are very sick. This disease is all over the country and no effort is made to check it as it is a light form.

General: Since work on the fort has stopped I have been using the boys in cleanup and repairs on the monument, and will have at least four to six weeks more work for them. It is understood that I will have them till July 31, or 90 days from the time they were turned over to me April 28. So says the Camp Commander, Lieutenant Ray.

The vegetation on the monument is getting very dry, especially the foxtail and other grasses, which is a big worry to me as there has been several grass fires the past two weeks up here; one on the Indian Reservation that has been burning since Friday evening. Several fields in the nearby town have burned over. I have had some work done removing the grass from along the roads and paths, and from around the buildings. For the past two months I have not been taking my regular days off, and seldom is the monument left without some member of the family here to keep an eye on what goes on.

The wildlife is about normal for this month, all the parents taking care of their young, teaching them to rustle their own living, and to take care of themselves. Very few snakes have made their appearance on the monument this year, though the CCC boys reports killing a number of rattlers on the desert south of us.

With a full program to be carried out in July with the help of the CCC boys, I should have this monument in as good a condition as it has ever been.

SWNM

CASA GRANDE

By A. T. Bicknell, custodian,
Coolidge, Arizona

Visitors this month, 1,026; travel year to date, 15, 776.

Weather: The weather continues cooler than last year although it is warm enough. Maximum temperature for the period was reached on June 22, with a temperature of 110 degrees. On June 19 last year a high of 119 degrees was recorded. We have had 15 days of the report period under 100 degrees this year; last year only two days for the month were under 100 degrees. Minimum temperature of 50 degrees was recorded on June 10. Last June 58 degrees was the minimum reading for the month. All these figures and comparisons, of course, just go to show that we are still enjoying "unusual" weather. A trace of rain fell on the evening of June 23.

Use of the Monument by the Public: Visitor travel continues far ahead of last year with an increase of 65 per cent in total visitors. Visitors for

SOUTHWESTERN NATIONAL MONUMENTS 316 MONTHLY REPORT FOR JUNE, 1941.

the report period were 1,026, an increase of 407 over June of last year. Of this number 754 made the trip to the ruins in 127 trips averaging approximately 46 minutes per trip for a total of 5,850 minutes. Lectures in the museum were given to 464 persons in 113 trips averaging 34 minutes for a total time of 3,911 minutes. Visitor contact total for the month was 1,218.

Ticket sales numbered 533 for \$133.25 as compared with \$120.50 last June. One reason for the big discrepancy between visitor count and ticket sales was a special party of 100 Sunday School children who made the trip through the ruin on June 6. There were only five tickets sold for a party of 105 people. Two hundred and ninety of those making the ruin trip did not receive guide service in the museum and there were an additional 108 people who went through the museum only, giving us a total unattended museum count of 398 persons. Picnic grounds were used by 230 people in 49 cars. Only 25 persons used the picnic area in June of last year. Runarounds for the period totalled 121 people in 52 cars.

Maintenance: Fifty-three wire screen protectors were made and installed with post supports to protect the young trees growing between the residential area and the Casa Grande. Minor repairs to the window screens in Assistant Superintendent Richey's quarters were made during the month. Grass and weeds were removed from the picnic area and from a part of Compound A to lessen the fire hazard. The new gate at the entrance to the ruin was hung.

Natural Phenomena: The mesquite trees on the monument are blooming, apparently quite a bit later than in the surrounding countryside. The Night-blooming Cereus in front of the custodian's office seems almost ready to bloom.

The owls, after a vacation of several weeks, have returned to the ruins with their entire family. One young owl was found dead on the floor of the south room on June 19. There was no evident cause of its death. A number of baby bats have been found dead on the floors the past few days. Past records report this having occurred before at about the same time of the year. On the morning of June 14, a large gopher snake at the west end of the administration building caused some excitement for a short while.

Projects for the ensuing month will be the usual guide and contact work. No new projects have been lined up pending the beginning of the new fiscal year.

Visitors and Items of Special Interest: 5/28/41 Mr. and Mrs. Huston from Hawaii National Park. Mrs. Huston reported that it rained every afternoon at their home with the record rainfall for one day being 17 inches, for one week, 52 inches.

5/29/41 Miss Elma Smith, of Ganado, Arizona. The first Navajo girl to graduate from a University--University of Arizona on 5/28/41.

6/6/41 One-hundred Baptist Sunday School children for a picnic and a trip through the ruins and museum.

6/10/41 Ranger Chrisman went to Florence to assist Naturalist Dodge with a lecture on reptiles for the Florence Lions Club.

6/12/41 Ranger Chrisman went with Naturalist Dodge to 11-Mile Corner for a lecture and movies on SWNM and Desert Flora and Fauna. There were approximately 200 persons in the audience.

SWNM

CHACO CANYON

By Lewis T. McKinney, custodian,
Chaco Canyon, New Mexico.

Visitors this month 228; travel year to date, 612.

General: Vegetation has almost completely covered the monument this month; however, a lot of it is Russian Thistle. Flowers of all kinds and colors are out, and the Chaco looks like an entirely different place. The end of the fiscal year is drawing near without a whole lot being accomplished in the way of improvements during the last 12 months. Most of this was due to bad weather, bad roads, shortage of enrollees in the CCC camp, etc. The first eight months of this fiscal year we had very poor equipment, and the last four months we were without an engineer or carpenter foreman. There were also many other difficulties.

Visitors: Travel this month has been very slow, for what reason it is hard to explain. Possibly a lot of would-be visitors have heard about the bad roads we've had during the past several months, and I gather from some of our visitors that the information is being put out that the roads are still almost impassable; so 228 visitors are all that we can account for this month. They came from 23 states and the District of Columbia.

Roads: The approach roads have been in very good condition throughout the month. The sandhull four miles north of the monument has been graded, raised, and plated with gravel by the New Mexico Highway Department and is in excellent condition at the present time.

Grounds: Some gravel has been hauled and placed upon the camp ground, the drinking fountain has been installed, and a general cleanup has been effected though millions of tumble weeds are still to be cut.

Wildlife: Several small cotton tail rabbits and prairie dogs have been seen this spring. The Scaled Quail are still around but no young have been noticed to date. Occasionally we see a coyote or a bobcat and now and then a fox. No young have been reported.

Museum: The roof of the Museum had to be repaired in several places due to damage done during the past winter. A complete clean-up was made, also several changes of the cases, in the cases, etc. Cataloguing is being done by Ranger-Historian Sowers. New labels, charts, and so forth are also being made.

Buildings: A complete repair job has been done on the custodian's tent-office. It has been shifted over a few feet in order to keep it more out of view of photographs taken from top of the cliff.

Personnel James C. Porterfield who has been working as per diem guide since May 18, entered on duty as temporary ranger May 31. Ted C. Sowers entered on duty as Ranger-Historian June 6.

Maintenance and Continuing Projects: Continuous horse patrol and repair to the monument boundary fence have been carried on, water gaps have been replaced (are gone again), and I hope the electric fences arrive soon so we can instal these instead of replacing the old type water gaps.

Park Service Visitors: Ronald Lee, Rodney Maxwell, Paul Balch, Eric Reed, and Raymond Higgins were monument visitors this month.

Weather: Maximum temperature was 92°, minimum temperature 33°, amount of precipitation, one-half inch; cloudy days five, partly cloudy days eight, and clear days 17.

SWNM

CHACO CANYON CCC

By Herman P. Phelps, project supt.,
Chaco Canyon, New Mexico.

Work has been going along rather slowly this month due to the low company strength and men being absent on emergency work along the La Plata River at Farmington. Foreman Gililand and 20 enrollees have been there since sometime in May and their absence from Chaco has been felt. It is hoped that these men can be brought back very soon, so that the road work can once more go ahead. Also, it will help a great deal if the rock and masonry crews, surveying crew, and a few more key enrollees are transferred from Pandelier here.

Soil and Moisture work has been going along nicely, in spite of the lack of men. Work has been done on the Contour Furrows and Dikes and Appurtenant Structures.

Road work has been slow, but we are still going ahead on the Entrance Road, Section "C" and the Headquarters Road.

The P&H shovel finally arrived here from Petrified Forest and today Senior Foreman Mueller is starting the long trek from Thoroau with the Cat. "70" and Galion grader transferred to us from Oklahoma. These pieces of equipment will be a great help.

Visitors during the month were: Field Supervisor Raymond Higgins, Soil Conservationist Maxwell, and Forester Balch. Mr. Balch is remaining two weeks with us and pushing the Soil and Moisture jobs.

Foreman Rush was ill a part of last week, but is now back on the job. Mechanic Christie has been laid up for about ten days and under the doctor's care.

The following projects have been worked during the month: Guide and Contact, Boundary Fence repair, Maintain Approach Roads, Maps and Models, Dikes and Appurtenant Structures, Contour Furrows, Entrance Road, Section "C", Headquarters Road and Emergency work on the La Plata River.

MOBILE UNIT

By Gordon Vivian, Archael. Foreman.
Chaco Canyon, New Mexico.

This month brought to completion the program of emergency repairs to walls damaged by the fall of Threatening Rock. An additional 28 walls were repaired this month, a total of 59 for the program. Funds and time were sufficient to complete all work contemplated but not to construct an additional large buttress.

Our Mobile Unit work, one crew repaired and raised the east plaza drainage system and repaired and capped walls enclosing the west side of the west plaza. A second crew has finished all work contemplated at Wiji, bringing all support and patching jobs at this ruin to completion. They have now moved to Pueblo Pintado where jobs 22, 23, and 24 are in progress.

SWM

WHITE SANDS

By Johnwill Paris, Custodian,
Alamogordo, New Mexico.

Visitors this month, 8,509; travel year to date, 42,626.

June hit a new high in many ways. First, our Director visited the area for the first time and his visit added much to our appreciation of the Service.

This month, as far as the New Mexico areas are concerned, will be remembered in that a New Mexico man and a former representative from our State was appointed Under Secretary of the Interior Department. The Honorable John Dempsey knows well the problems of the West and we can be assured of an understanding representative in Mr. Dempsey.

Chris Fox, one of the old time peace officers in the Southwest, has been appointed Secretary of the El Paso Chamber of Commerce and we can depend on Chris to send us plenty of visitors and tell the world about the White Sands.

June as usual finds us in a big rush to get many little things behind us before the end of the fiscal year. The completion of many little details will allow us to start out the first of July much ahead of what we feared, but not caught up by any means. The boys have kept plenty busy and in spite of a heat wave and 103° temperature, our travel has held up remarkably well, with 8,509 people in 1,876 cars. Last June gave us 4,877 people in 1,098 cars while in June, 1939 we had only 2,429 visitors. The Army alone is responsible for 1,494 of our June number. The boys are well pleased with the area and we get an almost daily visitation by someone who has been sent up by the soldiers at Fort Bliss.

No trips were made off the monument except to Alamogordo on routine monument business. Minor conferences were held with the grazing Service on land matters.

Regular inspections have been made on the used portion of the monument, but inspections of remote sections are long past due and will await some future date when more time can be given and the work slacks up a bit at headquarters.

No let up was noticed in the publicity we have received. Hardly a day gets by without some mention of the White Sands in one of the El Paso papers. The Southern Pacific and the New Mexico State Tourist Bureau are doing all within their power to attract visitors toward our unit and our attendance is showing the results of the effort.

A complaint was received and sent on to your office regarding the hours of closing. Naturally as our season approaches we have an increase in the before and after hour visitor, most of which we try to catch and many of which we miss.

Our operator has been running in full swing and if he continues to receive the number his concession attracts now on our peak days, we will soon be faced with the problem of supplying him more space.

The local Chamber of Commerce has moved its information office to the main street in Alamogordo and will attract much more attention than before. This will give us a few more visitors because of the larger number contacted. This organization would like many of our folders on the White Sands but we cannot supply them with as many as they would like.

With the addition of a seasonal ranger the first of July it is expected we can improve our visitor contact service considerably. We have hopes of getting a botanist from the State College at Las Cruces. Bob will use this boy in connection with building up our herbarium and museum work, with that portion of his time (12 or 14 summer hours) when he is not checking cars or contacting visitors. We have hopes of getting Matt Dodge in early in July to check over our museum activities, and are looking forward to a decided improvement along this line.

Accompanying Director Drury was Regional Director and Mrs. Tillotson and Assistant Superintendent Richey. Dr. McDougall and John Veal were in from the Region III Headquarters.

George and Joe have been plenty busy with the outside. We are attempting to finish the phone line by June 30. Our road holds up well but any long dry period tends to pot out the clay stretch. Joe watches it closely and keeps it in the best shape possible.

If you need any good men Hugh, I have the boys that can fit the bill. If Bob, George, and Joe cannot do the job, it can't be done. My assignment is certainly eased by the combination of their abilities. So with another ranger for the summer we will hit our summer stride July 1, and tighten up our belts to handle some estimated 35,000 visitors for July, August and Sept.

SWNM

GRAN QUIVIRA

By Joe H. Toulouse Jr., custodian,
Gran Quivira, New Mexico.

Visitors this month, 272; travel year to date, 1,424.

Visitors: We have finally caught up and passed last year's travel by some 22 visitors, giving us 1.4 per cent increase. Contacts are slightly down because of official business and the missing of 37 visitors. I held a highly successful lecture at Quarters the evening of June 23, showing slides and other data to some 11 members of the Washington and Jefferson College Archeological Expedition at Pueblo Pardo ruins, three miles south of the monument. This work is under the general supervision of this custodian during his time off and outside of hours, assisted by R. L. Stephenson, who was to help with the W.P.A. project here.

Weather and Roads: Weather has been somewhat wet, although the roads have been consistently good all month, and I believe have contributed to our visitor counts. Also many visitors are being routed this way because of washed-out bridges, etc. Our flowers are coming out, most of them are several weeks behind last year, though more plentiful.

Nature Notes: Have obtained the following nesting records and observations: Say Phoebe, Western Nighthawk*, Texas Nighthawk, Cassin Kingbird, House Finch and Canyon Wren. Starred bird above new record for here along with the White-rumped Shrike. Other nesting records we possess are: Sparrow Hawk, Canyon Towhee, Green-tailed Towhee, and Baird-Bewick Wren.

Accessions: Copies of Ned Burns' Field Manual for Park Service Museums, and Volume I of National Parks Bibliography were received.

Routine and Continuing Projects: I gathered sherd and stone collections for our archeological survey, five sites, bringing our total of sites located and mapped to 17. I erected the fire signs sent from Region III Headquarters in the Registry Box. I made several official trips to Santa Fe in regard to the W. P. A. project for here, only to have things discontinued for the time being because of quota cuts forcing the W. P. A. to close down some of their operating projects and refusing to open others until the quota is again restored. I exposed a roll of Kodachrome for Region III Headquarters publicity. Received a report from the Public Health Bureau regarding water sample from cistern--uncontaminated. Received copies of the new Research Reports to be filled out, which were done and returned to Headquarters. Checked south boundary fence and repaired it in several places; no stock on the land south, just staples pulling out from the posts where tension operated.

Projects for Ensuing Period: I will attempt to get over to Socorro, New Mexico, and finish up the land problem, that is the easement for the telephone line so that this can be accepted. Will continue to handle the visitors as they come, and whenever spare time permits and on personal

time, will oversee and supervise the excavations of Washington and Jefferson College, three miles south of here. If Stephenson stays on here after July 1 with the above expedition, I will have him make study skin collections for the scientific collections of this monument. Will also have him make archeological surveys of a number of sites and areas.

SWNM

ARCHES

By Henry G. Schmidt, custodian,
Moab, Utah.

Visitors this month, 472; travel year to date, 2,387

Weather: The first half of the month was very wet and windy. Several heavy rains filled all the washes to capacity, and wrecked our wild flower display. The last half of the month was warm and dry. Summer has arrived with a definite indication of remaining for awhile--each day the mercury soars a little higher.

Roads: The Windows Section road was badly washed by the rains during the first part of the month and was closed to travel for three days. Most of the damage was centered in the vicinity of Courthouse Wash Crossing, but this damage was repaired by the CCC maintenance crew and the road is now in good condition. The heavy rains further damaged the road down Salt Valley, many sections of the existing road being entirely washed out. This road is passable but only to experienced desert travelers.

Visitors: Travel to the monument more than doubled over the corresponding month in 1940. California, Colorado, and Utah sent us the largest number of visitors with the balance of travel originating in 27 other states.

Twenty-seven parties, with 132 people, were conducted through the Windows Section and 20 parties, with 170 people, were contacted at the Willow Springs Ranger Station or on the entrance road. Two parties with 11 people hiked into the Courthouse Towers section.

Park Service visitors included Dr. Ross Maxwell, Jack Diehl and George Norgard, Santa Fe, New Mexico; and Glenn Boyland and Art Gilmore of Mesa Verde National Park.

Newsworthy Visitors: Arches has been visited by more than its share of newsworthy visitors this month. Dr. J. LeRoy Kay, Curator of Vertebrate Paleontology at Carnegie Institute, and family, of Pittsburgh, Pennsylvania, visited in this section for two weeks. During this time, Dr. Kay toured the greater portion of the monument area and points of interest outside the monument.

Dr. Lawrence N. (Larry) Gould and wife, of Northfield, Minnesota, spent two days re-visiting the Windows section.

Dr. C. L. Hess and daughter, Charlotte, of Bay City, Michigan, are now re-visiting the Arches. While on their trip through the Arches last summer Dr. Hess made 200 Kodachrome slides of the area. He has used them in lectures

throughout the state of Michigan during the winter and stated that they were so well received that he returned this summer to complete the photographing of the Arches area.

Project Progress for the Month: The maintenance of the Windows Section road was continued to June 18. On that date the company strength of the Arches CCC camp was cut to a minimum; this project, consequently, was discontinued until the replacements arrive to bring the company up to normal enrollment again.

The collecting of flower specimens has been rather a disappointment than a project showing progress. Just at a time when the desert flowers were at their best, the rains came accompanied by hailstones and wind, making it necessary to postpone the collection of additional specimens until next spring.

Patrols were made in all sections of the monument.

Dr. Ross Maxwell, Regional Geologist, and I made a very complete survey of the entire area. A pack trip of six-and-one-half days duration took us through Devil's Garden, Delicate Arch, Fiery Furnace and Courthouse Towers sections. Specimens of the various formations were collected and notes and data compiled for use in preparing a geological map. His assistance is greatly appreciated. A detailed report of the trip will be made within the next 10 days.

Projects for the Ensuing Month: As much time as possible will be spent in guide and contact work in the Windows Section. Attendance at the fire training school at Bryce Canyon National Park and report on the meetings will be made. Compilation of data and detailed report of geological survey of the monument. Continued maintenance of the Windows Section road. Due to the growing need for directional signs to the various points of interest in the Windows Section, this project will be given sufficient time for completion during the month.

Notes of Interest: One of the interesting discoveries made on the pack trip with Dr. Maxwell is that of a new arch, located in a very inaccessible part of the Devil's Garden. The newly discovered arch is similar in shape to the North Window in the Windows Section and is approximately 130 feet in length and 45 feet high. It is framed in a great sandstone fin and is sided by an arch in the masonry, approximately 30 feet from each buttress.

Part of our trip carried us into the side canyons of the Salt Wash, in the Yellow Cat district, just east of the monument. During this portion of the trip we discovered several caves that showed distinct signs of early habitation. The largest of the caves and the most interesting, is approximately one-half mile east of the Devil's Garden. The cave is approximately 350 feet in length and 150 feet deep. We were able to trace several walls of inner buildings that have been covered, apparently, for many years with the accumulation of sand and debris. One fine mano was found in the cave.

NAVAJO

By James W. Brewer Jr., custodian,
Tonalea, Arizona

Visitors this month, 71; travel year to date, 245.

What They Did: Forty-five visitors in 12 parties were guided on Sandal Trail; 20 visitors went to the ruin in seven parties (one un-guided). One party of three was guided to Keet Seel. There were 22 camper days.

N.P.S. Visitors: On June 11, Assistant Superintendent C. A. Richey, Region III Landscape Architect Al Keuhl, and Region III Associate Engineer H. A. Montgomery arrived. Chuck brought out the motor for the tunnel pumping assembly and Monty approved the new plan for the motor mount. Al requested some photos of Residence No.1, which were immediately taken, developed, and forwarded to him. We all looked over the very desirable and much needed extension of Sandal Trail to Betatakin.

Visitors from Cooperating Agencies: Bill Brimhall of USIS visited the area on June 11. Engineer Rhodes, USCCCID, temporarily stationed at Shonto, and two of his Indian workmen, went around Sandal Trail after work on June 17.

Weather and Roads: Maximum temperature, 90° on June 22: minimum, 33° on June 9; precipitation, 1.03 inches--largest amount in 24 hours, .38 inches on the 6th. Cloudy weather prevailed until June 16, giving us a total of seven clear days for the monthly period.

The roads are good and well marked; the sign at Cow Springs was re-set during the month.

Improvements and New Construction: None

Ensuing Construction: None

Wildlife: On May 27 we forwarded to Headquarters a branch of Pinus edulis heavily infested with what has been tentatively identified as Chionaspis pinifoliae. Quite a lot of pinon trees surrounding the area and about 20 on the area are dying.

Sixty plant specimens have been collected, pressed, catalogued, and added to the monument herbarium.

General: Following Chuck's advice, we bought "two-bits worth of iron sulphate" and sprayed the power-house. The house was constructed of blue limestone, and the iron sulphate is toning it down with a rust color that harmonizes with the Navajo SS. We revamped the interior of the contact station and are on our way to having a vest-pocket museum. A water line was extended from the hose bib on the northwest side of the residence to the contact station. A self-closing tap now makes water available to visitors; a stop-and-waste valve in the basement can be closed in our infrequent absence to prevent inadvertent loss of water.

-----SWIM-----

SOUTHWESTERN NATIONAL MONUMENTS 325 MONTHLY REPORT FOR JUNE, 1941.

TONTO

By John Peavy, custodian,
Roosevelt, Arizona.

Visitors this month, 652; travel year to date, 7,810.

Opening: Despite steadily rising temperatures travel during the month is still very good as compared to this month last year. Out-of-state travel is very high. The highest unofficial temperature reading was 110 degrees Fahrenheit, on June 23.

Visitors: Six-hundred-fifty-two visitors arrived in 228 cars, with 121 of these cars from out of the state, 83 groups consisting of 334 individuals visited the ruins, and 94 groups consisting of 333 individuals visited the museum.

N.P.S. Visitors: The Louis Gastellum family and party of friends made a short visit on June 1.

The Goldens paid us a short visit on June 21. They were on their way to the Payson district with a car full of livestock. I hope you made it O.K., Goldens, without anymore car sickness among the passengers.

Mt. Elden Project Superintendent Bill Stevenson and son Dick arrived with our long hoped for museum cases on June 12.

Roads and Trails: The one-man entrance road resurfacing project was completed. I resurfaced about 50 per cent of the entrance road and through cooperation with the State Highway Department the road was graded on June 19. At the present time it presents a smooth unbroken surface throughout its length. I suppose it will start to rain just any day now.

The trail to the Lower Ruin is in good shape.

Accessions: (1.) Project Superintendent Stevenson delivered three standing wall cases for the museum. (2.) One book--"ABibliography of National Parks and Monuments West of the Mississippi River", was received from Western Museum Laboratories.

Outside Publicity: One manuscript concerning Tonto National Monument was submitted to radio station KPHO Phoenix, Arizona for broadcast.

Projects Completed and Projects for Ensuing Month: (1) Road improvement at Tonto completed. (2) Trail improvement at Tonto completed. (3) Routine guide and maintenance service will go on as usual. (4) Museum improvement consisting of additional display of material and enlargement of display space will be started during the ensuing month. (5) If I can obtain necessary materials, a fence will be constructed around the spring from which Tonto obtains its water supply.

AZTEC RUINS

By Thomas C. Miller, custodian,
Aztec, New Mexico.

Visitors this month, 1,486; travel year to date 4,917.

General: Travel, weather, and roads have been good the entire month with a noticeable increase in travel. It was necessary to perfect a new work schedule June 1 to accommodate as many visitors as possible. The monument is now opened at 7:00 A.M. and as many trips as necessary are made through the ruins until 6:00 P.M.

The Conoco Travel Bureau paid us a visit on June 5 and it is believed that we will come in for our share of the publicity derived from their visit.

The National Fellowship of Indian Workers held a convention in Farmington during the month. More than 200 workers were present and they hailed from 23 states. We handled the majority of this group when they paid us a visit on June 19 and 20.

The only noticeable detriment for the month was a hail storm that destroyed some good apple crops near the monument. However, the storm covered only a small area and the remainder of the fruit growers are expecting bumper crops. Range conditions are excellent and the prices for produce are much better than ever before in the history of this valley. While all the staff have worked hard, we feel that we have accomplished a lot and there is a general good feeling in northwestern New Mexico.

Weather: Maximum temperature 89°; minimum 38°. Total precipitation 1.20 inches. There were eight cloudy days, seven partly cloudy, and 16 clear days during the month.

National Park Service Officers: Ranger Thompson and family, Carlsbad Caverns National Park; A. E. Buchenberg, Wupatki National Monument; John K. Andrich, Roving Ranger, Hovenweep and Yucca House National Monuments; and Earl H. Morris, archeologist, Carnegie Institution, were visitors. Mr. Morris excavated the Aztec Ruins for the American Museum and served as the first custodian of the area for the National Park Service. Ted Smiley, Ranger, and nurse Christianson, Mesa Verde National Park; Ronald F. Lee, Supervisor of Historic Sites, Washington, D. C., and Regional Archeologist Erik Reed, also visited the monument.

Newsworthy Visitors: L. S. Cressman, Archeologist, University of Oregon.

Personnel: Ranger Hastings received his "sheep skin" at Western State College May 29. He is now in possession of his Bachelor's Degree. Homer is to be congratulated. Stanley J. Milford entered on duty as temporary ranger May 29. Paul Fassel, at one time guide and caretaker of the Aztec Ruins, died on May 29 after a long illness.

John K. Andrich, Roving Ranger, Hovenweep and Yucca House National Monuments was introduced to his new duties on June 6. Ranger Andrich seemed to think he was a small man in a great big country. However, it is believed that Andrich will make a valuable addition to our Southwestern

Monuments outfit. We greatly miss Roland Richert who is now in training in the United States Army at Fort Bliss, Texas. Roland was the Roving Ranger for the past two seasons. It will interest Roland to know that his babies are in good hands as long as Ranger Andrich is there.

Cooperating Agencies: The National Youth Administration furnished one youth for 50 hours during the month. This youth served as museum attendant.

Use of Monument Facilities by the Public: Total travel this month 1,486; for the corresponding month last year, 1,014; increase 472 persons. The above number of visitors arrived in 435 automobiles and busses coming from 48 states and the District of Columbia. Of the total number of visitors, 1,344 persons were guided through the ruins in 185 groups, and 1,238 persons were guided through the museum in 213 groups. Guide tickets sold, 945; annual permits, 2; revenue collected \$237.25, and 142 persons received information but did not receive guide service. Loiters and turnarounds were not counted.

Accessions: National Park Service Report Manual No. 201, 1941 revision was received. "A Bibliography of National Parks and Monuments West of the Mississippi" was received from the Western Museum Laboratories at Berkeley, California. "Cliff Palace, The Story of an Ancient City" by Don Watson was presented by the author during the month.

Projects, Routine and Completed, and Projects for the Ensuing Month: Public contact and guide work has been the major project during June.

Excess moisture during the past few months caused the visitor trail to settle and ruined our surface drainage near Kiva "L" in the main ruin. Fill was made and drainage corrected temporarily until funds are available to perfect permanent drainage. Weed eradication has been continued as time would permit, but due to insufficient funds our work on weed eradication is somewhat retarded. Public contact work and guide service will be maintained during the ensuing month as will monument protection and maintenance.

We are expecting the Mobile Unit of Chaco Canyon to move in shortly after the first of the coming fiscal year to stabilize the ruins. Every day we brace a section of wall or do a little something to the ruins with a promise that if they will only stand a little longer our ship will be here. May the Lord watch over that Mobile Unit until they arrive at Aztec Ruins safely!

SWMM

SAGUARO

By D. W. Egermayer, custodian,
Route 2, Box 544,
Tucson, Arizona.

Visitors this month, 743; travel year to date, 13,050.

Of the 743 visitors to the monument this month, 161 persons, in 52 parties, were contacted at monument headquarters. These visitors came

from 24 states, the District of Columbia, and Sweden, arriving in 256 cars. Seventy-three persons signed the new register sheet in the picnic area, giving us at least a better count of this type of use than has been possible in the past. Two horseback parties up to the Rincon Lookout are reported by Fireguard Harris. One accident occurred during the month, when a young motorcyclist "took a spill" near the old North Gate, and came into the headquarters for repairs to arms and legs, as well as the machine; his injuries were not serious, however.

The custodian made two pack trips to Manning Camp, on June 3-6, and June 16-17, the first to accompany the new Lookout, Mr. K. C. Kartchner, Jr., to the station, ride trails with him, and instruct him in his duties generally; the second trip was routine inspection and packing of supplies. Fire-weather reports have now been put on a twice-daily schedule, this being possible only when two men are stationed up "on top".

The cooperative survey of the bacterial necrosis of the Saguaro cacti, which had been carried on jointly by the University of Arizona and the Bureau of Plant Industry, has been completed, at least, in its initial stage, with the end of the school year. All scheduled field work in this area has been finished, maps drawn by the Chief-of-party, Bill Griswold, and turned over to Dr. Gill for blueprinting. Mr. Lightle finished his field identifications on all six sample plots, but it is now planned to make monthly re-checks, at least through the summer months. The insect vector was definitely determined, and laboratory studies of its life cycle will continue. At present Mr. Lightle has moved to Organ Pipe Cactus National Monument to begin a similar field-study project, on a somewhat curtailed basis, in that area.

Dr. Gill was here several days during the month to aid in closing up the work and it is our understanding that he was to go to Organ Pipe with Mr. Lightle to initiate the field work there.

Our only official Park Service visitor during the month was Regional Forester Saari, is for two days May 28 and 29, in connection with plans for future fire-protection improvements and organization. Official visitors from other government agencies included Mr. Johnson Neff and Dr. Tinkham, of the Fish and Wildlife Service, who are continuing the study of migrations of the Western White-winged Dove.

The first fire of the season occurred on June 22, when a bad lightning storm started a tree fire on the southeast slope of Wronk Peak. A rain the following morning put out the fire before the custodian and two fire-fighters arrived on the ground. We have been lucky in not having any other fires, so far, in spite of three severe lightning storms within the past week, as the Catalina District of the Coronado forest, just north of the monument has had four fires set by the same storms; three Class A and one acre-and-a-half Class B. The Tumacacori District to the south caught an 800-acre man-caused fire on June 16, and the Chiricahua District reports two lightning fires so far--all signs pointing to a long, and severe fire season.

Projects for the coming month, as now planned, include the construction (if possible) of a horse-trailer, and of a new stand for the Osborne Fire-finder in the Rincon Tower. It is also planned to start work on trail maintenance, with the employment of at least one, and possibly two, men. With only \$300 to cover 69 miles of trail, it is doubtful if more than a start toward brushing out the principal trails can be made, and no major reconstruction is even considered. Routine inspections of Manning Camp and the Rincon.

Tower will be made, and it is expected that the steps of the tower will be repainted.

Of unusual interest this month is the fact that, for the first time in the seven years we have been in Saguaro country, the big cacti are bearing flowers in unusually great numbers, and fruit, at one and the same time.

SWNM

ORGAN PIPE CACTUS

By William R. Supernaugh, custodian,
Ajo, Arizona.

Visitors this month, 450; travel year to date, 8,830.

General: After the long cool spring down here, summer has arrived and acts as though it were going to make up for all lost time as temperatures are running over the 100 mark every day. The hot weather and bad roads have cut travel through the area to a great extent but this is normal for the southern areas.

The well development for the headquarters is still going on but will again have to be closed down for lack of funds within a few days. As yet no water has been found. Drilling is down to a depth of 265 feet which has been exceptionally slow going through hard lava rock with layers of clay between.

With the arrival of Paul Lightle of the Bureau of Plant Industry, work is now progressing on the cactus disease study on Organ Pipe. Observation plots are being laid out and a general survey made of the extent of infection in the monument. From observations so far, infection in the saguaros is not nearly as serious as in the organ pipes.

Roads: With the drying out of the sand, all patrol roads are becoming a problem in the washes, and lack of maintenance on the main road has let this become a washboard from one end to the other.

The good news in the road situation here is the oiling of the Sonoyta to Rocky Point road. Work was started on this June 18 with oil being hauled from Ajo through the monument. I am told that oil has been purchased for the entire distance and that little construction will be necessary on the sand which has caused all the trouble so far on the road. Oil will be mixed directly into the sand to form the road. Completion of this road came unexpectedly and is now ahead of the Organ Pipe road.

Wildlife: This year shows an increase of White-wing Dove nests on the monument which is probably due to the protected area and good feed conditions this year. This also seems to be a good year for quail and coveys of 15 to 25 are common in all parts of the monument.

A camp trip was made into the Ajo Mountains with Mr. Kempton Warden of the adjoining wildlife refuge, which will result in closer cooperation with this agency.

Projects for Coming Month: At the present time no new projects are planned.

ORGAN PIPE CACTUS (Continued)

After completion of the well and cactus studies, the usual routine patrol and administrative work will continue.

SWNM

CHIRICAHUA

By Frank L. Fish, custodian,
Dos Cabezas, Arizona.

Visitors this month, 1,922; travel year to date, 7,617.

General: The weather has been of the best, reaching a maximum of 96° on June 16, with a humidity of 12. Several thunder and lightning storms occurred in and around the monument and started fires along both sides of the Chiricahuas in the neighboring Coronado National Forest, but none of them reached any size. A total of .10 inches of precipitation was measured at headquarters along with three readings of a trace; much more rain fell at higher elevations.

The Sulphur Springs Valley has had an invasion of grasshoppers, causing some damage to feed conditions. These pests started hatching in southern Graham and northern Cochise counties and at present are moving southward, eating yuccas, sotols, mesquite and the ranchers' gardens. As yet they have not come into the monument and at present their numbers have diminished and it is not expected they will cause us any damage.

Visitors show an increase of 803 or 71.7 per cent over last year. Two groups; Girl Reserves of Bisbee and Cananea, Mexico, 74 in number, May 25 to June 1; Presbyterian Young Peoples Conference, 95 in number, June 1 to June 7 took over the remodeled CCC camp and enjoyed a week of hiking, riding, swimming, games and campfire programs; one casualty resulted during a first-aid class when a young lady from Mexico demonstrated her immunity to poison ivy, the Chiricahua variety turned out to be more potent and the young lady returned home several days ahead of schedule. While these groups actually stayed off of the monument, they were only counted once during the week although they entered and reentered the area several times in riding and hiking.

Visitor Statistics:	Cars	Visitors	Out of State	Campers	Horseback
1941	434	1922	569	38	16*
1940	267	1119	291	2	8
Increase	167	803	278	36	8

*Does not include organized groups previously counted when entering by car.

Monument Inspections: Only one inspection was made during the travel month by Park Service Officials, this one was outstanding as it included the first visit of our Director, Mr. Dury; Regional Director and Mrs. Tillotson, (whom I had not seen for over ten years, back in the days when Parke Soules' residence was the office and museum, and Uncle allowed me the back porch to keep my life gatherings and charged me \$15 per month, and a colored gentleman thought I was the bravest man in the world to sleep next to them

skalingtons", or at least under the same roof) and Chuck Richey. The Director promises to return this fall and stay long enough to see some of this area, we hope.

Complaints: Three verbal complaints were received concerning lack of signs on the Onion Saddle Road. The Forest Ranger at Portal has the signs and will install them as soon as time from his fire control duties permits.

Accessions: The loan of a dump truck, from Montezuma Castle, is gratefully acknowledged.

Personnel: Harold E. Enlows entered on duty June 6 and we now have a Dr. of Geology working for the summer on our rocks. Mrs. Enlows, ("Butch") holds the womens' high jump record in Chiricahua. I observed her leap from a flat-footed start to the top of a five foot rock when prompted by a rattle from Crotalus klauberi. The only reason she didn't go higher was the rock wasn't tall enough. "Butch" has seen three of the little green rock rattlesnakes and is about to join the "one under every bush" crowd.

SWMN

HOVENWEEP AND YUCCA HOUSE

By John Andrich, roving ranger,
Cortez, Colorado.

Visitors this month, 13; travel year to date, 166--Hovenweep.
" " " , 5; " " " " , 50--Yucca House.

General: This fledgling arrived Saturday, May 31, at Headquarters for duty as Roving Ranger; and the immediate issuance of that purring "Flack Beauty" USDI 1254, started things off very agreeably. The interval at Headquarters was most pleasant, and the writer hopes to attain the perfect interpretational technique of the Casa Grandeans for Hovenweep before the end of the summer.

Everybody was naturally on hand at Aztec to give the new Roving Ranger the "onceover". I hope I passed their inspection, and do I like them, and their setup! Homer Hastings's hospitality was most appreciated!

Custodian Miller continued my education until we arrived at Hovenweep, the afternoon of the 6th, for which I am grateful. Having given me a short, complete review of all groups except Cajon, we raced the rain to good road at Ismay's trading post. A brief, pleasant discussion ensued there, and we departed hastily for Yucca House, where the Ismays, Ray and Houston and wives, were hosts to the Miller family. Mrs. Ray Ismay had a delicious meal ready for us.

Weather: Wet, until about the middle of the month. Mud experiences were something; but Experience, the best teacher, may be most useful before the summer is out. To the afternoon of the 23rd it was clear and quite warm, (compared to southern Arizona at any date.) Raining the last day and a half.

Administration and Antiquities: A good deal of time was spent with the Photographic Comparison, to show ruin deterioration over the winter months, of which there is considerable! It is hoped the notations will prove helpful, but it is difficult to describe what one hopes to get in a picture. Orientation to surroundings naturally dovetailed with search for section corners, and the elusive Cajon Group. Numerous field trips to Goodman Point, Yellow Jacket, Lowery Ruin, etc., were made, and interspersed with trips to town. Since Mr. Ismay farms, as well as trades, several trips had to be made to contact him to obtain data on Indian labor conditions. During the discussion it showered, so the McElmo road was rather slick.

On the morning of the 24th, the unusual opportunity presented itself to combine a talk on general Southwestern Archaeology, interspersed with advice on how to drive on muddy "Four Corner" roads, and an hour and a half interpretational tour of Hovenweep. Fortunate connections were made while leading a party of five to Hovenweep and back in their own car; road was still a little slick out, and it rained on our return to the highway. The trip was a five-hour one.

Considerable cleanup was effected at various times, and efforts were expended to gain accurate mileage logs, and in typing them for the loose-leaf notebook.

Visitors to Yucca House: Trips were made to Yucca House at the usual intervals, and pictures were taken here also. A dinner was enjoyed on one occasion, this time at the Houston Ismays'. Two Colorado cars are reported.

Visitors to Hovenweep: Wet roads, then rough, furrowed ones, were not conducive to much travel. Three Colorado cars came this month. The one aforementioned saved Hovenweep the ignominy to having to report visitor totals in a number of one digit.

N.P.S. Visitors: Custodian T. C. Miller, on a guide-inspection tour of the Monuments, paid us a visit.

Neighboring Government Projects: USCCCID foreman, Leroy Hamayain, Shiprock, New Mexico, passed several times, on his way to a fence project in the San Juan Valley near Aneth. Mr. Hamayain kindly took this ranger to the general vicinity of the Cajon Group.

Flora and Fauna Notes: The range appears in very good shape because of continued moist conditions for so long. The cacti blossoms never fail to amaze and delight one. Truly, they rival the American Beauty Rose. Large stands of June cheat grass make local field trips rather uncomfortable unless proper preparations are made.

One rattlesnake was encountered at Yucca House, and a large yellow bullsnake with black markings was seen late one afternoon about a mile-and-a-half from Hovenweep.

Mourning doves, quail, night hawks, eagles, together with two black ducks, are prevalent around the monuments. Chinese pheasants, an exotic species, present a rather incredible picture in the juniper and piñon country of Goodman Point and Yellow Jacket.

on duty; Mr. Ariss' appointment as Temporary Ranger has gone through, and Mr. Baxter is serving as per diem guide pending clearing of his appointment papers.

Trail: Much work was done on the trail early in the month, and it is now in excellent condition. Planting on the north talus slope is taking hold, and if wet weather continues we are hopeful that the earth fill there will become well anchored this year.

Communication: Custodian McKinney's radio went sour during the month; it is rumored that some Navajos convoyed a fleet of horses through the guy-wires of one of the masts, and the antenna did not function well lying on the ground. Now a new mast has been built, and communication between our monuments restored. Our two radio masts received a new coat of paint during the month.

Signs: During the month new roadsigns were made and put in place, many of the old ones having been destroyed during the winter. Roadsign replacement is one of our continuous projects; it seems the posts make excellent pry-poles for cars bogged-down in the bottomless mud of our highway, and wooden roadsigns furnish a convenient supply of firewood. A sign repair and retouching kit is being assembled, and will be carried in the truck for sign repair.

Roads Within the Area: The old north road (now closed) received much attention during the month. All old stakes marking the limits of this road and the former parking area and turn-around were removed. High centers in the present entrance road were removed; bad washed-out places were ... filled. The temporary parking area in front of the office was widened and new posts were set to define the limits of this area. This work is about 90 per cent complete.

Wildlife: Two mountain lions visited the area for several days and nights; one of them scratched on the door of the rangers' cabin one dark night but was not admitted, since the small cabin was already rather crowded. Tracks of both lions were found all around the cabin and the custodian's residence, and the garbage pit was raided nightly.

Soil & Moisture: Regional Soil Conservationist Maxwell inspected the area during the month. Old erosion dams, built during CWA days, had caused considerable erosion and widening of the arroyo north of the residence. This office made a series of photographs and sent them to Mr. Maxwell for possible use in illustrating the report on this project.

F. Y. 1941: We closed it out on the 20th.

Inscriptions: The rock will not dry; we cannot clean and waterproof the inscriptions until all moisture has left the rock, so we are hoping for several days of warm, dry weather before the real summer rains arrive, in order that we may resume work on the inscriptions. We also intend to complete the work of making latex moulds of the Spanish inscriptions, but must

wait until the rock becomes thoroughly dry.

General: During the month the Flamo installation was completed, and the refrigerator put into service at last. A gas stove has been ordered, and the hot water heater will be connected into the system during the coming month. When the residence was built, the window fastenings on the outer windows were put on backwards. "Bax" has made the remedying of this condition one of his projects, and at this writing the work of changing-over the window fastenings is approximately 50 per cent complete. A temporary fence was constructed across the south end of the patio area in the residence during the month. Considerable planting of native plants and shrubs has been done along this fence, and at the corner of the office porch. A temporary barrier was placed south of the office, to discourage visitors from taking short-cuts; native plants are being placed along this barrier line, and when such growth becomes sufficient to form a natural barrier, the wooden one will be removed.

The stepping-stone walk to the patio gate will be completed during the coming month; we hope to complete the flagstone pathway in the patio.

The month has been a busy one. Work on the card files continues; both Rangers have a fine manner of giving lectures, and there are no moments of spare time. The outfit is functioning smoothly and efficiently.

SWNM

WUPATKI

By David J. Jones, custodian,
Flagstaff, Arizona.

Visitors this month, 578; travel year to date, 2,068.

Travel: During the past month there was a 30 per cent increase in travel as compared to the same period last year. Traffic is heavy on the highways and everyone seems to be imbued with the vacation spirit. Visitor use was greatest at the Citadel Ruin where 395 persons registered, as compared to 301 at Wupatki Ruin. Names duplicated on both registers totaled 116. The increased travel cannot be attributed alone to the fact that the excavation is of interest to visitors, as Sunset Crater National Monument shows similar increase. Out-of-state traffic accounted for 30 per cent of the travel.

Weather: Until recently this month has been unseasonably cool. The spring rains continued for more than a month later than usual. For a while it looked as if there would be no summer dry period. Everyone, including visitors, is well pleased and the countryside is greener than it has been for many a year.

General: The sheep reported grazing south of the monument were moved to summer range on the San Francisco Peaks. There was no difficulty with their trespassing onto the monument, except for one occasion when a new herder allowed the flocks to stray.

An adequate water supply for normal purposes this summer is being assured by the construction of a water-tight catchment at Wupatki Spring. The flow of both Wupatki and Heiser is greater than ever recorded before at this time of the year, producing 650 and 3,450 gallons per day respectively.

A model of Nalakihi Ruin, excavated in 1934 by Park Naturalist King, is on display in the city of Flagstaff. It was constructed by Mr. G. C. Sullivan who learned to make models during the period he worked at the Museum of Northern Arizona on a W. P. A. Project. This miniature of Nalakihi is built to a scale of one inch to the foot, using actual fragments of Moencopi Sandstone, and is as accurate as the information obtained during excavation would allow. Since the completion of the W.P.A. project, Mr. Sullivan has continued this work as a hobby, and hopes eventually to make models of each major ruin on Wupatki National Monument.

A valuable collection of 20 Kodachrome slides was donated by Mr. C. S. Webber of the Sierra Club and Mr. E. M. Craven of New York City. It consists of Wupatki plants, ruins and landscapes and a few Navajo scenes from the reservation.

Mr. A. E. Buchenberg made a brief trip to Mesa Verde, Petrified Forest, and Aztec Ruins. Buchy was particularly impressed with Aztec Ruin and the fine job that Cal. is doing there.

Archeological Research: Archeological excavation at Wupatki Ruin continued, although progress was impeded by difficulties in obtaining sufficient CCC enrollees. The average crew consisted of three to four men, but there was considerable shifting of men back and forth from construction to excavation, making it practically impossible to train a crew of sufficient size. In order to make any progress at all on excavation it was necessary for Van Cleave and myself to handle most of the visitors. In spite of this five trenches on the west side of the ruin and two stratigraphic tests were completed and piles of rocks from previous excavation partially removed. Sherd washing and the cleaning and cataloguing of artifacts, preparation of drawings and notes were kept current.

Activities of Outside Agencies: Dr. Guy R. Stewart of the Soil Conservation Service spent two days studying prehistoric conservation methods on the monument, visiting sites in the vicinity of Wupatki Ruin and Crack-in-the-Rock.

Geological reconnaissance of the Little Colorado Monocline was made by two graduate students from Columbia University, Arthur N. Strahler and E. D. Koons. They were reexamining the field work of the late Donald Babenroth so that a posthumous report can be made upon his research in this region.

N.P.S. Visitors: Official visitors during the past month included Superintendent Miller, Assistant Superintendent Richey, and Landscapers Kuehl and Krueger of the Region III Hdq'ts. Park Collaborator Eddie McKee brought CCC Geologist Schenck of Boulder Dam Recreational Area for his first visit.

Other Visitors: John C. McGregor and Major L. F. Brady of the Museum of Northern Arizona, accompanied by friends, inspected the excavation at the

ruin.

Miss Katharine Noble of Chapparal Tours came out to get detailed information on this region for the conducted tour she is planning through northern Arizona this summer.

SWNM

SUNSET CRATER

By David J. Jones, in charge,
Flagstaff, Arizona.

Visitors this month, 2,114; travel year to date, 5,114.

General: A total of 1,057 persons actually registered at Sunset Crater during the past month. From previous observations this would actually represent a total of 2,114 visitors. Ninety per cent of the visitors were from out-of-state.

Complaints were received verbally as to condition of the roads, lack of signs, and to the lack of personnel stationed there to explain the features at the crater and render the visitor information concerning this region. Of these the sign situation alone can be remedied and signs are on order.

SWNM

CANYON DE CHELLY

By Charles D. Wyatt, custodian,
Chinle, Arizona.

Visitors this month, 288; travel year to date, 823.

Weather: We humbly bow in grateful respect to the be nigh weatherman for dealing us a full house or month of nice weather. Very light rains in two storms is all we had that would stop visitor travel. The maximum temperature for the month was 92° and the minimum of 51° shows how pleasant our nights have been.

Administration: With the improvement of road conditions, we have been fortunate in having two inspections during this report period. Dr. Ross Maxwell, Regional Geologist, was up to look over a find of Elephas bones, but more of that later.

Drs. Eric Reed and Ronald Lee spent the entire day of June 25 going over the problems of the monument with the staff and presented many constructive criticisms in their fields. That kind of look-see is a great help and raises the esprit de corps to new heights.

Three little publicity snow balls were started down the mountain this month. The first consisted of several commercial photos taken near Spider Rock to be used in a series of advertisements which will appear in Life Magazine starting in September. These stills were taken by Mr. Ernest Knoe after permission was granted by Region III Headquarters. Next came Mr. Joe Martin, publicity head of the Santa Fe Railroad, for a room of facts.

Then Mr. "Rusty" Davies of the Phoenix Republic staff for new pictures for the fall Resources Edition of that sheet.

Maintenance: Road work kept the custodian busy during the no-visitor periods of the month. Other than that, time was spent cleaning, soldering, and painting a 500 gallon storage tank this monument inherited. The drains from kitchen and service porch was finally unplugged by the old method of plugging all outlets and forcing water down the vents. An attempt to locate the line in the patio did little more than mess up the grass.

New Construction: Through the good offices of the local CCC-ID the dike which protects the Park Service sewage system and the whole Thunderbird establishment was rebuilt during the month. The new structure is built of sand and faced with a layer of clay in good Mississippi levee style. That should keep the Rio de Chelly in its place. Now Cozy need not spend his spare moments singing "River Stay 'way From My Door." The dike is completed.

Junior Archaeologist Steen carried to completion the stabilization of White House Ruin during the month. It is a neat business-like job. With a little dependable erosion control work we should have a ruin that won't change for many decades to come.

Operators: Since Cozy McSparron's "Thunderbird" has made its first trip up the canyon, we are now in the full swing of the summer's activity. Regular trips start on June 27. Re-decoration of the cabins over there makes the entire layout look like the Ritz.

Activities carried on during the month by Seasonal Ranger Wesley R. Hurt, Jr. include the excavation of several tail vertebrae of some, as yet unidentified, species of the genus Eliphus. The Custodian found the bones seemingly in situ while doing a little road work. Another project completed during the month was the collecting and tentatively identifying some 50 species of wild flowers and shrubs. A check list of birds found on this monument was made out. Then, in addition to this, all artifacts stored on this monument since its founding were catalogued. Just to keep from getting bored, our Mr. Hurt located an old Navajo and a Pueblo II site and made a sherd collection and site survey of that area.

Pottery sherds and artifacts unearthed by Steen during stabilization on White House were classified and indexed.

After the arrival of James N. Spuhler on June 20, both young men really got down to work on a manuscript on Canyon de Chelly. This work is to be some 30,000 words in length and really set up in one volume complete story on Canyon de Chelly.

The Multiplex display was worked on by the Custodian during the month, and he also prepared an article for the Arizona Highways Magazine.

Public's Use of the Monument: Visitors during the month totaled 288 with a total contact time of 150 hours. Our most newsworthy visitor was Mr. H. Eustace, founder of the Seeing Eye Foundation of Red Bank, New Jersey.

Projects: Projects during the coming month include work on the Canyon de Chelly MS and Multiplex display and the usual contact and guide work.

Personnel: Just to let the folks know that the Wyatts are still all alive, we will recite their adventures of the past month. Cha'D. recovered from the measles with no more after effects than three styes in one eye, but only one in the other. Ann, while suffering no broken bones during this report period, fell off the dining room table onto the concrete floor the same day she got the measles. Ruth is about ready for the paper dollies, and the ole man got out of it all by spending most of the spare time on road work.

Wes Hurt reported for work June 1, with his accordian to enliven the evenings of the lonely school teachers in Chinlo.

Jim Spuhler, at one time Seasonal Ranger at Bandelier and Canyon de Cholly, started his seasonal stint here June 20. The big question before his arrival was whether he would return to the West with a Harvard accent. (He didn't)

We country folk certainly enjoyed Charlie Steen's stay among us. His company is another good hypo for the ole esprit de Corps.

SWNM

TUZIGOOT

By Jack Cotter, custodian,
Clarkdale, Arizona.

Visitors this month, 887; travel year to date, 5,779.

To begin with, it was a comfortable feeling to be able to return from a vacation, however successful, and find it possible to slip back into official duties with the easy cognizance accorded an old shoe. Of course, the chief reason there was no pinch was that routine had been so ably handled by Relief Ranger Ed Alberts, to whom Tuzigoot raises its hat.

June in retrospect was a pretty busy month at the monument. Eight-hundred-eighty-seven visitors peered and listened in the museum, and inspected the ruins. Assistant Superintendent Richey and Engineer Montgomery also passed Tuzigoot's threshold, as did Evon (Vogty) Vogt, the new hook-and-ladder man at Montezuma Castle. Mighty nice meeting you, Vogty.

N.Y.A. work progressed apace during the last fortnight, and the boys, with the aid of a borrowed dump truck from Headquarters, have gravelled the service road to quarters, surfaced almost all important paths with bitumuls mix, covered the scarred slope behind the museum where the old wall fell, and pulled down the ornate but inappropriate rock wall and concrete settee combination along the path to the ruins. Rock from the wall was salvaged and stored for future ruins stabilization work. The area on either side of the flagstone walk has been filled in with earth, and is lying fallow and waiting for either weeds or shrubbery, depending upon whether the landscapers are going to bestow their grace upon Tuzigoot. Much miscellaneous handywork was done about the place by the N. Y. A. boys, including treating of exposed outdoor woodwork with linseed oil. Most important was the installation of a new water hydrant at the side of the museum and quarters in the service road, thus minimizing, a little, the fire hazard.

The custodian is going to bat with the School District and Phelps-Dodge

to carry through negotiations for obtaining title for the government for a new pipe line. We expect some day to re-christen Tuzigoot with the first flagon of pure water that reaches the monument through the new pipe line.

SWNM

MONTEZUMA CASTLE

By Earl Jackson, custodian,
Camp Verde, Arizona.

Visitors this month, 1,110; travel year to date, 5,321.

Five-hundred-twenty-nine tickets were sold, two complimentary passes were issued, and 88 children entered the Castle free as under age. A total of 619 persons entered the building. Visitors arrived in 349 cars, of which 125 were Arizona cars. Thirty-six states and Washington, D. C. were represented, as well as Hawaii, Argentina, Scotland, and France.

Newsworthy Visitors: No special groups or headline visitors this month.

Park Service Visitors: June 2 (and June 20) R. R. Maxwell, Chief, Soil & Moist. Conservation Division, Region Three Headquarters, visited us.

June 6 - Charles A. Richey, Assistant Superintendent, Southwestern National Monuments.

June 22 - Mr. and Mrs. Joe Golden--Joe is a member of the clerical staff at Headquarters, Southwestern National Monuments.

Weather and Roads: The month has been quite dry, as is usual for the period. Temperatures are lower than normal, with the result we have had very little of the really oppressive summer heat usually experienced in June. Maximum temperature was 102, with a mean maximum of 86 degrees. Minimum was 43 degrees. There were three cloudy days and six partly cloudy. All entrance roads are open, and all are receiving travel. Gravel roads are rough and corrugated, so that high speeds are dangerous. A mile of main approach road between here and McGuireville is being given a gravel coat by W.P.A. construction crew, preparatory to the anticipated oil coat. This thick gravel makes speed dangerous, and one or two cars have been stuck in gravel on soft shoulders.

Routine and Continuing Projects: The recently altered museum is still not officially open, for there simply has not been time enough in which to complete even temporary exhibits, however many parties have visited the partial exhibits. In the archaeology room the mummy case has been cleaned and repainted and the mummy placed on exhibit again, and temporary exhibits in wall cases 1, 2, and 3 installed. Case 4 has material in it, but not arranged yet.

No progress has been made on basic research projects this month, nor is it expected until the peak of the travel season is over.

A number of hours work were spent during the month in placing herbarium specimens in new genus folders, and this task is about half completed.

A great deal of time was spent in raking and burning phenomenal quantities of dead weeds, mostly wild mustard, which constituted a severe fire hazard over much of the grounds and trails.

The refrigerator in the ranger's house went haywire, and several hours-work was necessary to install a new one, which works perfectly.

Office work in connection with the fence building job going on here is time consuming, and is current.

Acquisitions: The state of Arizona donated to the monument one of its large and beautifully done signs for our entrance from the county road, with two distance markers to supplement it. Have had no time to erect these signs yet.

From Federal Prison Industries were received six metal signs for road and parking area markers. Four of these have been erected.

Personnel: On June 16 Evon Z. Vogt, Jr. entered on duty as summer ranger here. On June 17 Ranger John E. Baczuk entered on a month's annual leave.

Publicity: On June 6 Jack Northrup of International News Photos came to take pictures of the Castle for Yavapai Associates to use for publicity purposes.

On June 14 Rusty Davies, Staff Photographer of the Arizona Republic, took pictures of the Castle to use in the forthcoming Progressive Arizona edition of his paper.

Special Construction Jobs: On May 28 the job of constructing a campground and picnic area a quarter mile up Beaver Creek from the parking area was finished. The unsightly white of the limo gravel which covered the campground road was covered with brown topsoil, much more in harmony with the surroundings. Thanks to Charles Krueger, Assistant Architect who was on this job!

A raised section of revetment (flood wall protecting the terrace along the foot trail leading to Montezuma Castle) was completed during the month by the construction crew of Wesley Mullenaux, Soil and Moisture Foreman, with the exception of some tying in a few places. Mullenaux will complete this before leaving.

The job of putting a fence around this monument is expected by Foreman Mullenaux to be completed on schedule by July 1. He is being pushed for time on this job, because of delay in delivery of fencing material from contract sources.

General: In general, we have been extremely busy at this monument, and expect the condition to continue for quite a spell. All of which is good, for you can't get into mischief when you are busy. The monument seems in good condition. There are small maintenance items we haven't had time to get at, but shall probably pick them up next month. Travel is lively here now, with a high percentage of interested visitors. There has been slight use of the campground, partly because that area is so new that rains have not yet packed the earth fill that was necessary in places. Picnicking has been at a minimum, because we have been oppressed for three weeks with a plague of small winged insects which crawl all over and through everything

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on the place, swarming over picnic tables, through weeds and vines and bushes, down our necks, into our beds, everywhere. They don't bite or sting, but just tickle and crawl and squish when you brush against them or step on them. They have killed some of the vines around the office, by simply sucking the moisture out of the leaves, and have even killed some of the hardy young mesquite bushes. Their numbers seem to be somewhat on the decline now. It is a good thing, for the custodian was about to go bug house brushing them off his neck while trying to write enough government reports to sink a medium sized cruiser.

SWNM

TUMACACORI

By C. G. Harkins, ranger,
Nogales, Arizona.

Visitors this month, 489; travel year to date, 7,395.

General: June has been a normal month with a few hot days, but the nights have been comparatively cool. The continued dry weather has necessitated continuous watering of all plants, shrubs, and trees. One thunderstorm on June 23 produced a little rain, also a fire on top of the San Cayetano Mountains east of the Mission.

Visitor travel has dropped 60 per cent from last month, but shows a gain over June of last year.

Use of the Monument by the Public: A total of 489 visitors were conducted through the mission and museum; 201 of these were Arizona residents. In addition to the above, 217 persons in 64 cars used the monument facilities.

Routine and Continuing Projects: The following negatives were filed in manilla envelopes with appropriate caption and sent to Headquarters to be added to the official files there: Sixteen negatives of the well drilling and museum construction, 30 negatives made in 1936 and 1937 to justify stabilization at Tumacacori, 11 negatives on repairs and general shots, and 6 negatives on the propane gas installation.

Routine maintenance of restrooms, grounds, museum, patio, garden, and mission was carried on during the month.

Projects for Ensuing Month: Watering of trees and shrubs, cleanup around the storage shed, and washing, cleaning, sorting, filing, and classification of artifacts from the 1934-35 archeological excavation. This will include classification of all pot-sherds, all stone, iron, copper, glass, and shell objects found during the excavation.

WALNUT CANYON

By Ed. Alberts, Relief Ranger,
Flagstaff, Arizona.

Visitors this month, 1,669; travel year to date, 5,088.

General: Conditions are satisfactory at Walnut Canyon; CCC work is progressing in a very adequate manner; weather, of late, has been fine; and approach roads are in fair to good condition.

Weather: Early part of the travel month was cool, and wet--a goodly amount of sleet covered the ground in spots one Sunday in June, with snow falling on the nearby peaks. Last three weeks have been clear and windy. Fire hazard has been in the moderate stage, very likely. No fires on the monument have occurred. Fortunately, too, no recent "Tuzi-type" thunderstorms have occurred--since there is no connection with the power lines at this area, no plunging into darkness would have been observed in any case.

Visitors: A total of 1,669 registered visitors reached this monument this month. They arrived in 636 vehicles. Of these folk, only 350 registered from within Arizona; the remaining 1,319 souls hailed from 42 other states. Registrations from Guam, Hawaii, and England were noted. This must mean that summer travel is now under way on US 66, despite caustic remarks regarding its pitted condition. These travel figures show a slight increase for the month, over same period last year; however, total travel for year to date shows a definite drop over 1940 travel year to date. Longer and wetter winter, just past, probably accounts for variation.

Park Service Visitors: Several inspections of the CCC work program at this monument have been made this month - refer to Mr. Stevenson's report for names and dates. Among those who might be considered bona-fide monument visitors were Engineer Montgomery, Superintendent Miller, and Custodians Cotter and Jones.

Interpretive Activities: A total of 364 people in 141 parties were given guided trips around the "Island"; probably 100 people made the trip unattended; and 1,048 people in 283 parties were given short talks at the Observation Point. Due to a variety of circumstances, largely to insufficient personnel, a total of 621 registered visitors were uncontacted. This number would be appreciably increased were those unattended visitors who failed to register to be included. This unfortunate circumstance will be remedied somewhat, perhaps, upon completion of the museum and exhibits, thereby permitting larger parties on the trail, with resultant fuller coverage into conducted trips.

Personnel: Archeologist Beaubien has been on annual leave status since June 3, with the writer enjoying the pine-scented air of Walnut, in his absence. Paul is due to return early in July in time to plunge into the crowds concomitant to the Flagstaff Pow-wow.

Projects, Continuing and Completed: As all major work projects here are being accomplished by CCC, those matters are best described in Mr. Stevenson's report of jobs done by Mt. Elden CCC Camp.

Nature Observations: A group of visitors reported seeing a mature brown bear, from the ruins trail, early one morning this month. If this is true, it should be of interest; however, one of the CCC guides reports that he was in the neighborhood of the supposed bear at about the time reported, and that he was clad in a black, fuzzy sort of jacket. So, we don't know.

SUM

CAPULIN MOUNTAIN

By Homer J. Farr, Custodian,
Capulin, New Mexico.

Visitors this month, 3,300; travel year to date, 11,750

During the month there were visitors from 36 states, and one from South Africa. One of the most interesting groups that visited this monument was the Colorado Seminar in Botany, field trip class, made up of 14 botany professors. We also had two Boy Scout troops, Captain Ezall's troop from Denver, Colorado, and a troop from Sulphur, Oklahoma.

WEATHER: The weather has been fairly evenly divided with rains and sunshine, but very cool temperatures during the entire month with the exception of the last few days.

MAINTENANCE: The road is in good condition and was widened 12 to 14 inches the first of the month.

WILDLIFE: This has remained the same as last reported.

FLORA: As a result of the heavy snows of the past winter, and the many nice spring rains, the vegetation has grown far beyond our expectations. All over the monument there is a profusion of blossoms; bluebells, yucca, bluebonnets (lupine), forget-me-nots, toy cacti, wild cherries, wild gooseberries, wild currants, mountain mahogany, and many others too numerous to mention.

SUM

BANDELIER

By C. A. Thomas, custodian,
Box 669, Santa Fe, N. M.

Visitors this month, 1,406; travel year to date, 3,951.

Rain, flood, washed out bridges and roads have been our misfortune this month. Bad weather conditions have seriously retarded travel. A desperate struggle to complete CCC projects before termination of the camp June 26, has resulted in confusion of the area. The usual maintenance of roads, trails and buildings incident to the hard winter and stormy spring has kept all hands busy. Completion of the south boundary fence under the Soil and Moisture project, completion of residences Nos. 1, 2, and 4, the sewage disposal system, and minor projects, bring to a successful close a development program initiated several years ago. Bandelier now ranks as a well-developed monument.

The weather in this part of New Mexico has continued to have an unusual amount of moisture through June. Rain fell on 14 days of the month, resulting in an increase in precipitation to the amount of 1.85 inches. High temperature for the month was reached on the 20th with a reading of plus 92 degrees. Three nights during the month the mercury fell to plus 38 degrees. Waterspouts, cloudbursts, floods, and washouts have been general throughout the State of New Mexico. General conditions throughout the state have been unfavorable for travel. Bandelier has felt the situation acutely because of being off the paved highway.

Maintenance, New Construction: The crew working under Foreman White on the south boundary completed the fence project on June 6. The Custodian made final inspections on June 4 and 7. CCC completed the additions to Residences Nos. 1 and 2 on June 12. Residence No. 4, the Custodian's residence, was completed on June 20. The sewage disposal plant was completed June 21. Minor projects such as completion of furniture for the museum lobby and for the lodge development were not quite finished before the termination of the camp. A few items will probably be turned out by the Chaco Canyon camp and shipped to us here.

Interpretation and Guide Service: Bandelier was visited by 1,406 people during the month; 1,109 of these visitors were conducted through the ruins in 177 trips which consumed 245 man-hours, and 638 visitors were conducted through the museum in 119 trips for a guide time of 40-3/4 hours. Six campfire lectures were given in the museum lobby to a total attendance of 148 people. One caravan trip to the Otowi Section accommodated 16 visitors.

Botany: Seasonal Ranger Clark, working in slack times and on his personal time, has collected more than 200 plant specimens in addition to the specimens already in the Bandelier herbarium. Clark has prepared and mostly identified these 200 specimens. As soon as necessary materials arrive, he will begin the task of mounting all specimens so that they can be stored in our herbarium.

Zoology: A small buck deer was found by the park ranger about three miles above headquarters. The deer apparently had been severely wounded and instructions were given to Ranger Edon and Maintencemman Davis to attempt to treat the injured animal's wounds. However, when they were finally able to relocate the animal, it had died. The deer apparently had been struck by an automobile on the highway above Frijoles Canyon and had found its way into the monument and died.

Geology: Region Three Geologist Ross Maxwell identified several mineral specimens for us. These specimens are common in Frijoles Canyon, and had resulted in many visitor queries which the monument personnel had been unable to answer positively.

Travel: Travel showed a decided decrease as compared to June 1940, with 1,406 visitors coming here this year as compared to 1,591 in June 1940.

Newsworthy Visitors: Custodian Cottor of Tuzigoot National Monument and Mrs. Cottor visited the monument May 29 and 30. Chief of Forestry Coffman from the Washington Office accompanied by Regional Forester Saari paid us a visit during the month. Ronnie Lee, Supervisor of Historic Sites, accompanied by Regional Archeologist Reed, spent the day with us June 20. Superintendent Miller spent June 21 and 22 at Bandelier.

Personnel: Seasonal rangers were entered on duty June 2. Ranger McNeil of El Paso, Texas was with us during the 1940 season. Ranger Ora Clark comes to us from Chiricahua National Monument, and Ranger Sylvester J. Keefe comes to us from Colorado. The position of permanent maintenanceman still remains open although E. B. Davis continues to serve temporarily in that capacity.

Forest Fire Protection: One lightning fire was controlled by the Custodian and Ranger Mahan during the month. Fire was located on the Santa Fe National Forest a short distance west of monument boundaries. Started by lightning in a pile of pitchy logs, conditions in the forest were so wet that there was little chance of spread. Frequent rains and showers have kept the monument in good condition as far as fires are concerned. Even the frequent lightning storms do not seem to cause blazes due to wet conditions.

Building Fire Protection: The annual inspection of fire hazards in Government buildings was carried out by Ranger Mahan during the month and was transmitted to your office.

Insects and Tree Diseases: The foliage eaters have been working on the alders all along Frijoles Canyon. The pest was identified by Acting Regional Forester Carlson as the Alder Flea Beetle (Haltita bimartimata). Control measures have not as yet been decided upon.

Publicity: Twenty-thousand two-fold leaflets descriptive of Bandelier National Monument were received from the Washington printing office during the month. These multilithed folders are far superior to the old mimeographed informational leaflets. We have received a sample copy of the

16-page booklet put out by the Washington Office, but so far have not received a supply of these booklets.

Routine and Continuing Projects: During the month the photograph file for Bandelier has been completed and all property entered in the card files. This long-promised project has finally been accomplished. The building maintenance project has been carried on under Ranger Eden during the month. All buildings have been maintained so far as our materials would reach. Many months of work remain to be done but nothing can be accomplished until 1942 appropriation makes more funds available. To expedite finishing CCC projects before termination of the camp, several monument personnel have been acting as project foremen during the month. The Custodian and a crew of 25 men spent ten days completely rebuilding the fire protection and visitor trail from the upper crossing to monument headquarters. High water this spring had destroyed this important trail. Much work has also been necessary to prevent a jungle of weeds from completely hiding our ruins. Abundant rains caused vegetation to grow with surprising rapidity.

Projects for Ensuing Month: Heaviest of travel of the year should keep us very well occupied during July. It is hoped that we may be able to find the time to further control weeds in the ruins, repair and maintain monument trails badly damaged by last winter's snows. A great deal of work will also be necessary to clean up after the CCC camp. The camp left so hurriedly that no actual cleanup was possible and it may be a year before the monument can be put into shape desirable in National Park Service areas. Ranger Clark will continue his project of collecting and identifying plants. It is hoped that ruins stabilization projects can be initiated as soon as possible after July 1.

SWM

The following item, which may be of interest, is an excerpt from Herbert Evison's address before the American Museum of Natural History in New York City and was "lifted" from the Regional Review March-April, 1941 - Ed.

"The Educational Program of the National Park Service does not---and is not intended to---provide an education in natural history, geology, archeology, history, or any other specialized field of study, even though the areas themselves may be and are used extensively in connection with university and other educational processes. Its purpose is to quicken the imagination, enlarge the vision, and to augment the inspiration of those who come to the parks, so that their experience may be more deeply satisfying."

SWM

HEADQUARTERS

INTERPRETERS' REPORT

By Dale S. King, Archeologist
Coolidge, Arizona

PERSONNEL

Archeologist King spent the entire month at Headquarters on routine duties. He took one day and a half annual leave and one-half day sick leave.

Archeologist Steen returned June 12 from a tour of ruins stabilization duty at Canyon de Chelly. During the rest of the month he prepared reports, aided in the classification of the library pamphlet files, and performed routine duties.

Naturalist Dodge was at Headquarters during the early part of the month but took annual leave beginning June 16 due to illness in the family.

110 - NEW OR UNUSUAL ACTIVITIES

More completely described below, activities of this nature included the ordering for sale by the Southwestern Monuments Association of reprints of articles of Arizona monuments which have been appearing in the Arizona Highways Magazine, and also the complete cataloguing of pamphlets, reprints, and other library material which has been accumulating for many years.

412 - PUBLIC RELATIONS, PUBLICITY

An unusual number of requests for information and photographs were answered.

Reprints of articles on Arizona monuments which have been appearing in Arizona Highways Magazine were ordered for sale at the respective monuments. In addition, 5000 extra copies are to be held and bound eventually, into a book when the series on all the monuments in the State is completed. It is believed that these articles will give the monuments exactly the right type of publicity as well as filling an urgent need for handy informational material.

413 - EXTENSION SERVICES

Five talks given during the month by Naturalist Dodge contacted 281 people in extension services. All were given on personal time.

421 - PROGRESS OF EXHIBIT PLANNING AND INSTALLATION

Word was received that the preliminary plan for the exhibit at Chiricahua National Monument has been approved by the Director. Tangible progress on exhibits now in place will be hindered until cases are improved and until some help in preparation of museum exhibits can be obtained.

Additional steps were taken in an attempt to obtain prehistoric material for the Walnut Canyon region to be used in the Walnut Canyon exhibits.

SOUTHWESTERN NATIONAL MONUMENTS 349 MONTHLY REPORT FOR JUNE, 1941.

INTERPRETERS' REPORT (Continued)

A justification was written to obtain a small additional sum to aid Custodian Jackson in preparation of exhibits at Montezuma Castle National Monument.

Through the excellent cooperation of Mechanic Gene Stonehocker a motor rig was arranged to turn the light cylinder for an exhibit at White Sands National Monument, and was forwarded to be installed.

430 - STAFF RESEARCH AND OBSERVATION

The bone material from the Tonto excavations were received in identified condition .

440 - COOPERATIVE RESEARCH

A bibliographical reference was furnished Ralph Calvin, author of "Sky Determines".

Extremely fortunate was the assignment of Arthur Woodward, Curator of History and Anthropology of the Los Angeles museum, to the Berkeley laboratories for two weeks for much needed research on the history of Pipe Spring National Monument in connection with the proposed interpretive program for that area. It is believed that Mr. Woodward will make valuable contribution to the program. It is hoped that additional collaborative projects of this kind can be worked out in the future.

450 - SOUTHWESTERN NATIONAL MONUMENTS LOAN LIBRARY

A major improvement was completed this month with the complete rearrangement of the library pamphlet files which have badly needed attention for years. These were rearranged in accordance with the Dewey Decimal System as used in the main library.

The following publications were received during June: Six books, two pamphlets, and fifty-two periodicals.

Librarian Maria Monreal accomplished the following much needed work: Books accessioned, 29; books lettered, 396; books processed, 110; books shelved, 318.

In addition she typed 60 headings for the photograph file, typed and inserted 526 headings for the angle tube folders in the pamphlet file, indexed the headings of the pamphlet file, and catalogued 500 clippings, booklets, and leaflets in the pamphlet style.

Loans and returns during the month was slightly less than usual.

460 - SOUTHWESTERN MONUMENTS ASSOCIATION

With the exception of ~~the~~ ordering of reprints mentioned above, Southwestern Monuments Association affairs received only routine attention. The books were kept current, however.

520 - NEWSWORTHY VISITORS

John McGregor, Louis Caywood, and John Baczuk.

STATUS OF ARCHEOLOGICAL PROJECTS

Archeologist Steen with antiquities funds placed White House in Canyon de Chelly National Monument in such condition that it will withstand the elements for some time to come, providing that stream erosion is checked. He made strong recommendations that an erosion control project of sturdy

INTERPRETERS' REPORT (Continued)

proportions be instituted early in the next fiscal year. The roads stabilization record forms were practically complete on the White House job at the end of the month.

An estimate of needed stabilization money for Gran Quivira for the fiscal year 1943 was prepared at the request of the Superintendent.

Various arrangements were made in preparation for the Ruins Stabilization Committee's model survey of stabilization needs to be held at Wupatki National Monument during the month of July.

For work at various monuments in ruins stabilization, the findings of this committee will be of vital importance.

COMPLETED PROJECTS

In addition to the projects completed above, rough drafts were submitted to the Superintendent of wording for Headquarters circular letters to supplement recommendations 3 and 4 of the Custodians' Meeting. These deal respectively with technical accessions in correct cataloguing of the museum specimens and improvement of study of visitor reaction.

Several custodians were assisted in obtaining back numbers of periodicals to complete their library files.

Much needed office equipment for the Interpreters' Office to handle the rapidly extending library in its newly catalogued condition were justified to the Superintendent for purchase, either at the end of the fiscal year or early in the next fiscal year.

A brief history of the events leading up to the recent improvement in Montezuma Castle museum cases was prepared for the Superintendent at the request of Director Drury.

Bird study skins were placed in celluloid tubes with stoppers by NYA Worker Josephine Monreal.

Sets of Headquarters photographic prints were supplied to Bandelier National Monument, and work was started on the Casa Grande set.

PROJECTS FOR ENSUING MONTH

Archeologist King will proceed to Flagstaff at the beginning of the report month to meet Ronald F. Lee of the Branch of Historic Sites for a short field trip. He will then return to Wupatki National Monument for the vital survey of ruins stabilization needs there, working with Engineer Preece, and Archeologist Nusbaum and Reed. He will spend the rest of the month on this project.

Steen will spend the early part of the month on routine duties, including the issuance of the Superintendent's Monthly Report, will make the preliminary arrangement of Antiquities funds for the fiscal year, submitting his suggestions to the Superintendent. If funds are made available early in the month, he may go into the field on an urgently needed stabilization project.

Dodge will return from annual leave about the beginning of the report month it is hoped. After clearing his desk, it is hoped that he will be able to visit Montezuma Castle and White Sands National Monuments for improvement of museum exhibits at those two areas.

MONTHLY STATISTICAL REPORT													
STATION	Personnel		Guided Trips		Lectures		Attended Stations		Unattended Stations		Visitor Participations Hours	Total Contacts	Total Visitors
	Per.	Tem.	No.	Att.	No.	Att.	No.	Att.	No.	Att.			
SCIENTIFIC AREAS	Arches	1	0	27	132			20	170		161	307	472
	Capulim Mountain	1	0							1000			5300
	Chiricahua	1	1	17	150	76	590	14	77		512	817	1922
	Natural Bridges	0	0										125
	Organ Pipe Cactus	1	0	2	3	7	13				55	16	450
	Rainbow Bridge	0	0										50
	Saguaro	1	0					52	161		55	161	743
	Sunset Crater	0	0							1057	264	1057	2114
	White Sands	3	0			2	97	550	2785	3548	419	6453	8509
	TOTAL BIOL.-GEOL.	8	1	46	235	85	700	616	3193	5605	1466	8811	17685
ARCHEOLOGICAL AND HISTORICAL AREAS	Aztec Ruins	2	2NYA	185	1344	213	1238					2582	1486
	Bandelier	2	3	297	1747	358	1528		520			5222	1406
	Canyon de Chelly	1	2	63	307			47	217			734	288
	Casa Grande	2	0	127	754	113	464					1218	1026
	Chaco Canyon	1	2	69	390	41	237					627	228
	El Morro	1	2	41	158	3	17					175	165
	Gila Cliff Dwell.	0	0										10
	Gran Quivira	1	0	47	230	6	48					292	272
	Hovenweep	0	1	2	9	1	5					9	13
	Montezuma Castle	2	0	180	784	77	342					1126	1100
	Navajo	1	0	20	68							68	71
	Pipe Spring	1	0	37	153	37	153					306	195
	Tonto	1	0	83	334	99	353					667	652
	Tumacacori	2	0	109	489	109	489					978	489
	Tuzigoot	1	0	192	729	208	844					1673	887
	Walnut Canyon	1	3CCC	141	364	283	1048					1412	1669
	Wupatki	1	0	90	278					393		692	578
Yucca House	0	0										5	
TOTAL ARCH-HIST.	20	15	1683	8138	1548	6766	47	737		393		17781	10540
TOTAL ALL AREAS	28	16	1729	8373	1633	7460	663	3930		5998		26592	28225
Last Month	28	11	1160	6061	753	4109	11	3939	15	4007		17242	20809
Last Year	27	14	2015	8116	1468	6144						16566	21032
TOTALS													

BRANCH OF MAINTENANCE

By Eugeno Stonehocker, mechanic,
Coolidge, Arizona.

In addition to the regular servicing of cars and trucks, the following was accomplished: One trip made to Chiricahua to transfer USDI 1237 and to pick up and deliver a battery, monument signs, and telephones. On the return a load of signs was picked up at Tucson and brought to Headquarters for later distribution. Tires were changed around on USDI 1222, fenders straightened and painted, exhaust pipe, muffler, and tail pipe replaced. USDI 2950 was completed and put into service. Chevrolet dump USDI 1251, used on Soil and Moisture, broke down and required a complete differential overhaul. Pickup for Tonto was overhauled, a new motor of late model installed, and put in order for return to that monument. A trailer hitch was made and installed on USDI 2950 to replace one taken off for USDI 1232 at Saguaro. A survey list of worn out and obsolete equipment was made up for sale, and the list of tires now up for sale was checked and corrected. One telephone and 300 feet of cable was sent to Gran Quivira, and four telephones sent to Bandelier. USDI 1224 was checked and an order for parts placed so that it can be put into shape for the field. Box for pickup USDI 2950 was painted for use by Relief Ranger Alberts. Parts were ordered for repair of Lincoln Zephyr USDI 2951.

SWNM

BRANCH OF ACCOUNTING

By Parke Soule, chief clerk,
Coolidge, Arizona.

Vouchers prepared during the month, regular appropriations.	172
Vouchers prepared during the month, CCC	145
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Purchase Orders issued, CCC	145
Allotment Ledger Sheets prepared, regular appropriations.	222
Allotment Ledger Sheets prepared, CCC	132

Expenditures:	This Mo.	To Date
1411000 National Park Service, 1941.	\$13,535.33	\$123,694.83
140/11000, National Park Service, 1940-41.	488.97	2,190.00
14x1010, Roads and Trails, N.P.S.	2,717.11	9,632.85
1410130, Soil & Moisture Conservation, 1941.	4,045.17	9,016.35
Civilian Conservation Camps.	19,539.54	115,177.68
	\$40,326.12	\$259,711.71

At the end of the fiscal year, it must be stated that equipment records have not yet attained a status satisfactory to this office. All other work is essentially current. Pressure of work has not diminished.

*****SUM*****

PERSONNEL NOTES

Just to close the file, the Superintendent has at last met John Baczuk, ranger at Montozuma, and Mrs. Baczuk. John is on annual leave and his sister from Chicago is visiting at the Castle. She expresses surprise to find so much vegetation on the desert. She isn't the first to expect a small Sahara in southern Arizona.

Evon Z. Vogt, Junior (Vogtie) is on the job as a temporary ranger at Montezuma. He received his degree at Chicago early in June; expects to return for post-graduate work in the fall. There is a rumor that he may get married, too. We wonder whether the batching at Montozuma may be a factor spurring him on to matrimony.

An item in the Gallup Gazette announces that on June 10 Vogtie was granted the Walgren Fellowship in social anthropology which amounts to \$500. This will enable Vogtie to continue his studies for a graduate degree. Congratulations, Vogtie, that is something really worth while.

The Superintendent started out to visit El Morro via Grants on June 24; ran into a rain about 10 miles out, and, with black cloud masses ahead, turned back. He reports that the little black Ford was across the road most of the time and that all sense of coordination was lost between the front wheels and the back wheels. The back end of the car seemed determined to take the load most of the time. And it was only a shower!

Bandelier lost its last CCC boy on June 28, and with him, Hub and Ruby Chase who have lived in the canyon for seven years. Gone, too, are Jim Fulton, Bill Chauvenot, Ed Cano, Albert Grubb, Luke Thompson, Lawrence Scheier, and Vince Ellis. The Canyon won't seem like the same place without these familiar faces.

Iola Thomas and the children have been gone most of the month on an extended vacation. The Thomases will move into the newly completed custodian's residence on their return.

The Joneses at Wupatki, and the Beaubiens at Walnut Canyon report July 1 as moving day--the Joneses from their prehistoric apartment house to the new custodian's residence; the Beaubiens from the decrepit old log ranger's cabin; both to attractive new custodians' residences.

Reported as the loveliest sun tan in the Southwest: Carol Ann Peavy. Competitors should report total area and submit color cards.

Word has recently been received that Quintin Bradley, former seasonal ranger at Canyon de Chelly, has just received his commission as Second Lieutenant in the United States Marine Corps. Quint's father, Willard Bradley, is on the engineering staff of the Region III Headquarters at Santa Fe.

Seasonal ranger Hurt who, with Jim Spuhler, is aiding Charley Wyatt at de Chelly this summer, claims a name that makes a complete sentence. His name is Wesley Hurt Junior.

Charlie Steen recently received a letter from Paul Ezell, former seasonal ranger at Walnut Canyon and per diem guide at Casa Grande. Paul is with the Border Patrol and is stationed at El Paso. Paul reports that his most time-consuming job is chasing back small boys who wade and swim across the Rio Grande, apparently for the sole purpose of getting chased

by the Patrol.

Hap Dodge is rapidly recovering from an appendectomy administered at the Florence Hospital on June 15. It was one of the come-without-warning type. Mattalie and Griff have carried on housekeeping activities in her absence and during convalescence.

It is not definitely known whether Hugh has quit smoking cigarettes or not, but it must be admitted that he does appear much more dignified with the pipe which he has substituted for the paper rolls.

A short note from Homer Farr's daughter together with absence of the report from Capulin Mountain informs us that Homer Farr has been sick. We all hope that the illness is of short duration and that Homer will soon be his pleasant, conscientious self again. (Report received later - Ed.)

A number of the field men as well as Headquarters personnel had the pleasure of meeting Supervisor Ronald Lee of the Washington Branch of Historic Sites office. "Ronnie" has just finished a fairly comprehensive trip through the Southwest, and we hope that he was as well impressed with us as we were with him. Regional Historian Neasham accompanied Supervisor Lee on his tour to Region III areas.

Bill Supernauth and John Peavy came in to Headquarters since their reports were received and the stencils cut. Bill was walking on air because on the very last day of the fiscal year his well drill broke thru into water-bearing sands. Water at Organ Pipe at last! Peavy was as cheerful as usual, and was quite optimistic as to the eventual whipping into shape of the surfacing of the entrance road so that it will not wash off with every rain. He reported that hot weather was beginning to make itself felt in the tent which still serves as the Peavy home the year around. Marge was recently stung by a scorpion with highly unpleasant but not serious results.

Earl Jackson's narrative about the bug blitz at Montezuma is having considerable meaning for several families at Casa Grande. A similar attack filled the bachelors' quarters with hordes of the tiny insects which drove the boys out and forced them to seek a temporary haven at the abandoned CCC camp. Hugh next felt the attack and, after killing enough bugs to fill the vacuum cleaner bag twice, without noticeable reduction of the panzers, Hugh beat a retreat to the Richey domicile. As the monthly report goes to the mimeographer, Gene Soule and Bina Bicknell are valiently resisting the invaders with mop, broom, spray gun, and vacuum cleaner, and seem to be holding their own. All-out aid is being furnished by other residents who are hastening defense preparations in case Bina and Gene are over run. Requests for assistance have been sent off to the State Entomologist with the hope that an expeditionary force may be dispatched with the necessary equipment and trained personnel to route the enemy. Refugees at the CCC Camp hope that help will arrive soon.

****SWM****

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